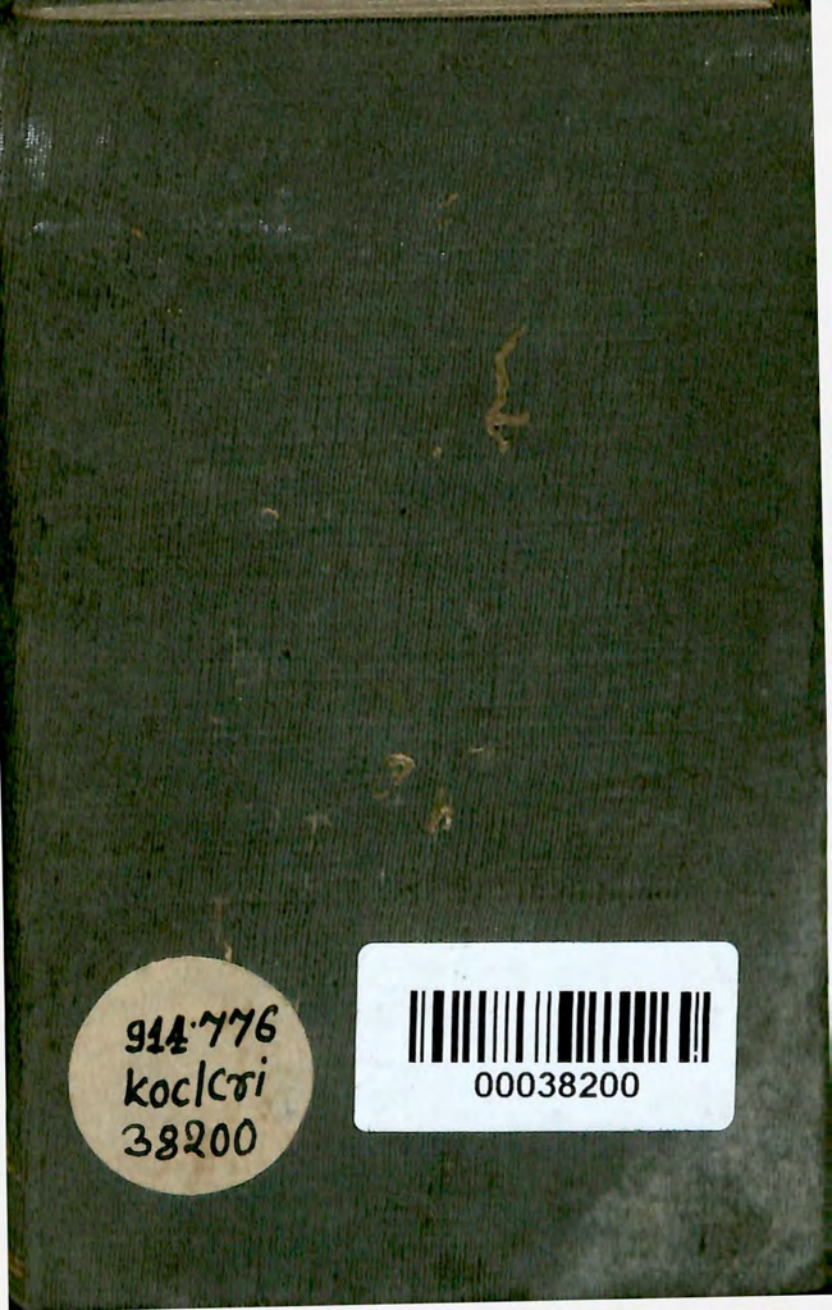
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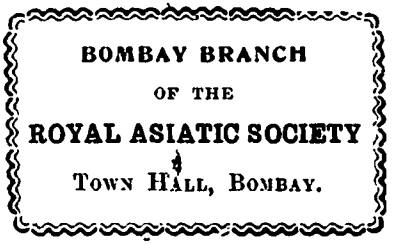

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THE CRIMEA:

WITH A VISIT TO ODESSA.

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By CHARLES W. KOCH,
AUTHOR OF THE "HISTORY OF EUROPE."

With Illustrations.

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LONDON:
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PREFACE.

THERE is probably no country in Europe of which such an erroneous opinion has been constantly entertained, as the Crimea. Even in Russia, more especially in St. Petersburg, the views entertained on the subject are as faulty as among ourselves. When Catherine II. took possession of the peninsula, and wished to visit a country renowned as much for its fertility as for its beautiful and romantic scenery, the great Empress, during her residence there, was purposely deceived; for reasons I cannot explain; and all sorts of false villages were established, wherever her road led. She would, however, probably have had an opportunity, during a more lengthened stay, of convincing herself of the true state of the case, had she not been suddenly compelled to fly from her modest residence at Sebastopol, to escape the murderous designs of fanaticised Tatars. Thus, then, the erroneous opinion about the great fertility of the Crimea has been continually maintained, and has not been sufficiently contradicted by travellers, among whom Dubois de Montpereux, who died too early for his country, and Prince Anatole Demidoff, have been the principal. It must also be added, that this error is promoted by the maps hurriedly produced to suit the popular demand—though those reduced from Demidoff's larger charts in Paris are not free from the same fault—numerous villages are marked upon them, the greater part of which are not in existence, but are well adapted to confirm the false view of the great fertility of the Crimea. The mistake is explicable by

the circumstance that the Tatars of the plains are nomadic during the greater part of the year, and change their place of residence after a short interval, whenever there is a lack of pasturage for their immense herds. On the maps, however, these spots are not merely marked as villages, but even a quantity of names may be noticed, which date from the period when the Crimea was still in the power of the Tatars. The narrative of a journey through these regions, which are now attracting the attention of the whole of Europe, and which, leaving politics out of the question, simply describes the condition of this interesting country, will probably not be unwelcome. I believed that I should furnish the clearest insight of the state and condition of the Crimea by pursuing the same plan I followed in my former works, and only adhering faithfully to an account of what I personally saw. Although this plan may appear to some readers fatiguing, I believe that is the only method by which to obtain a clea knowledge of the Crimean peninsula. I have also appende two chapters, containing a general description of the Crime and the northern coast of the Black Sea, with reference t their natural phenomena and productions.

I will therefore recommend this little book, which may regarded as the conclusion of my travels, to the same kin indulgence which my former works obtained. The recognitio which my exertions met with is a great recompense to me fo the numerous sacrifices I made in the cause of science, and, with a hope of supplying a better knowledge of countrie which, though so highly interesting, have never yet beer sufficiently traversed by Europeans.

CHARLES KOCH.

Berlin, 1854.

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BULWER AND HIS WRITINGS.

MESSRS. ROUTLEDGE & CO. have much satisfaction in calling attention to the subjoined extracts from an ably-written article in the February number of *Blackwood's Magazine*, upon the genius, versatility, and power, exhibited in SIR EDWARD BULWER LYTTON'S novels. The observations of the writer so strongly confirm the impressions which induced Messrs. ROUTLEDGE & CO. to undertake the republication of the entire series of those novels, that they have no hesitation in submitting a few of them to the consideration of the public, in the full expectation that such a course cannot but tend to increase the popularity and extend the fame of "the first novelist of his time."

When it came to the public ear that the novels of Sir E. B. Lytton *had been purchased at a fabulous price for a cheap reprint*, there can be little doubt that this great test of the great writer's popularity gave, in almost every mind, a certain stability and permanence to his fame.

* * * * *

To Bulwer, the author of *Pelham*, *The Caxtons*, and *My Novel*, we assign the highest place among modern writers of fiction. There is always power in the creation of his fancy; he is always polished, witty, learned. * * * His acquaintance with the lower-groundwork of society does not reach the kindly and familiar knowledge of Dickens; and his expositions of the lordly world of rank and riches, in which he is perhaps more at home, are not distinguished by the keen and poignant insight which belongs to Thackeray; yet his books are more perfect productions than either of these his contemporaries have yet to boast of, and he is himself a larger spirit, a more complete and perfect man. Touches of pathos, * * * and flashes of bright humour, are in other writers of the day; yet we do not falter in our judgment, that Bulwer is the greatest of modern artists in the sphere he has chosen—the first novelist of his time. * * * Since the days of Scott were ended, there is, in our apprehension, no pinnacle so high as that on which we hang our wreath to Bulwer—like the Roman emperor, a prince among his equals, the first of his craft.

* * * * *

Neither politician nor moralist, yet something of both—neither a weeping philosopher nor a mocking satirist, yet skilled in all the weapons of wit and wisdom—is the great writer whose name stands at the head of our page. That he is a man of lively and universal ambition, or, rather, that his conscious powers cannot endure to be foiled by anything, we may discern by a glance at the present list of Messrs. Routledge. * * * We can trace him from vein to vein, and from age to age; from the revels of the gay Pompeians to the feats of the romantic highwaymen—from the table of Boling broke to the feast of Harold—from the Byronic twilight of sentimentalism to the lightsome day of *My Novel*. Turn another page, and the same hand, weary of perpetual conquest, has tried another field, and is already a successful dramatist, and a writer of terse and powerful verse. This is surely a wide enough basis to build reputation upon; and when it is added that Sir E. B. Lytton, when it pleases him, can speak as well as write, it may be fairly acknowledged that this restless intellect, this prompt and curious mind which is not content to leave any pursuit untried, has followed, with a worthy enthusiasm, almost all the peaceful pathways that lead to fame.

It is considerably more than twenty years since, in *Pelham*, the young author made his *début*, with a brilliance which we in these days look back upon with envy. A first appearance is not nearly so much an event now as then, for novel-writing was much less a common amusement twenty years ago, and the public had greater leisure to be interested. But he who would read *Pelham* to-day, does not get it in the musty volumes of its primitive issue: it is now one of those perennial books which are always renewing themselves, and you can choose your edition. To say what *Pelham* is, may look somewhat unnecessary at this time: how a young, inexperienced, and unmatured intellect could have produced it, is its great wonder, and that it is worthy of the Bulwer of to-day is its great praise. * * * * *

We know no writer who has so many periods in his literary history; nor can we classify Sir E. B. Lytton's works better than by the painter's jargon, with its early and late Raphaels, its pictures after such and such a style. In "his first manner" *Pelham* stands alone; and then at intervals we have the legitimate historical novel, the mystical sentimental, the criminal picturesque. *Paul Clifford*, *Eugene Aram*, and some part of *Night and Morning*—which, however, we are bound to admit, is a powerful and striking story, full of interest and character, which may very well take ground on its own merits—represent the last. We take the *Last of the Barons*, *Devereux*, and *Harold*, as the best specimens of the historical, and are content to leave the rest within the vague and dreamy precincts of the

sentimental. One of the latest of the series, *Lucretia*, is an elaborate illustration of the darkest and most unmitigated crime, written for what purpose we know not, unless it be to enforce our author's opinion of the diabolical character of intellect without heart or principle—a doctrine which he urges more or less through all his works, and which has come to perfection at last in the bloodless, but too often baffled schemer, Randall Leslie.

The *Last of the Barons* is an admirable masquerade, where all the personages speak well up to their character.

After detailing the characteristics of *The Last Days of Pompeii* and *Harold*, the writer thus proceeds to speak of the later productions of this eminent novelist:—

And now there is a pause and period to the labours of our author: he has retired upon his laurels, or he is entering new fields of conquest. Which is it? Without any sound of trumpet or ostentation of announcement, a new fame begins to steal upon the world. Let us not be over modest. It is the kindly pages of *Maga* which introduce the new-comer to his audience; but it would be mock humility to refrain from our due and natural admiration on such a score. It is an English landscape which brightens upon this canvass; and here is no overstrained romantic passion, but the sweet yet powerful bonds of common life in an English home. As this home enlarges before us, * * * we gradually become, not so much lookers-on, as members of the family party. * * * The easy and felicitous expression in which this pleasant history is clothed, the elegance of its quaint humour, the beauty and purity of its leading characters, are enough to make a reputation of the highest class. * * * * *

My Novel itself requires perhaps a greater discrimination in its verdict of approval. Rich to overflowing with character, a wise and weighty book, it is impossible to deny this to be the greatest production which the author has yet given to the world. Sir E. Bulwer Lytton we believe to be unrivalled in his vocation. He has a broader grasp, a fuller life, than any one of his contemporaries; a more easy and perfect knowledge of all the manifold phases of humanity—*The Varieties of English Life.* He is never at a loss, whatever the class into which the exigencies of his story lead him; but is equally felicitous in the stately and decorous Earl of Lansmere, and in the ruined genius of Burley; in that kindest of homœopathists who tries to harden his heart by means of globules; and in the country tradesman's proud old wife, who preserves the good fame of her family with the sternness of a Spartan. Widow Fairfield, Mrs. Leslie, and Lady Lansmere, are equally characteristic; and had

the author been a man of unknown rank and name, we should have found it quite impossible to tell in which class he was most at home. Genius alone does not give this wonderful facility; and these books could only have been written in the prime of a long-trained and much experienced maturity, and by a mind which, not content with mere knowledge of the world, has exercised its great powers to penetrate, not only into the more splendid mysteries of our existence, but into the homely heart of everyday life. * * *

It is not in our *rôle* to discuss the qualities of Sir Edward Bulwer Lytton as a dramatist, a poet, or an orator; but we know, as all the world knows, that in each of these avenues to fame he has pretension, and that his success there confers upon him a distinguished place. To very few men has fallen such a lot of universal achievement—to very few, such unvarying distinction. One triumph is generally as much as one life is good for; but this man has won all the prizes in this brilliant lottery—has triumphantly rescued and increased the laurels which once seemed about to glide from his grasp, and has rung the changes upon the sweet bells of imagination and philosophy, only to gain from them, at each touch of his bold and rapid finger, a new and varying fame.

We will not congratulate our author on his triumphs; but we will congratulate him that he has lived to fulfil the high promise of his youth—that he has outlived all that could make his name a questionable sound in the literature of his country. * * * To the two last works of Sir E. B. Lytton (*The Caxtons* and *My Novel*), we turn with affectionate gratitude. There are few men in the world who could introduce us on familiar terms to the society of Austin Caxton, to the friendship of Roland, or make us privy to the amicable controversies of Dr. Riccabocca and Parson Dale. For placing such society within our power, we owe the author no common thanks; and in tendering them, we do not repeat only our belief that he has won thereby the highest place in modern literature, but—a greater matter—that he has made a fit use of the genius with which he is gifted, and done his devoir gallantly and well for his great audience, the people—as a man had need to do who exercises one of the greatest faculties bestowed upon earth, under the eyes of Heaven.

A complete list of Bulwer Lytton's Novels and Romances will be supplied gratis to any parties applying direct to the Publishers, or through any Bookseller in the Kingdom.

PALACE OF THE TATAR KHANS AT BAKTCHI-SARAI.

THE CRIMEA:

WITH

A VISIT TO ODESSA.

CHAPTER I.

DEPARTURE FROM TAMAN—KERTCH.

General remarks — Hospitality of the Circassians — The wanderings of Ulysses—The Cossacks and their forays on the Black Sea—Their songs and stories—The Cossacks as borderers—Kertch and its trade—Panticapæon—The museum—A Makrocephalic skull—Tmutorokan—A modern mausoleum—Tumuli—Prince Herheulidse.

AFTER two long and rather fatiguing expeditions to the East, when I stood on the coast of the peninsula of Taman—once so notorious for the piracy of its inhabitants—and was just on the point of setting sail for the Crimea, that promised land of the Russians, I turned a parting glance toward the lofty peaks of the Caucasian mountains. All that I had experienced beneath their shade crossed my mind; and though I longed so much to be at home among my family after a year and a half of absence, still I found it a hard task to take a last farewell of a country which I had liked more the longer I resided in it. The inhabitants had received me, almost universally, in the kindest fashion; no one had annoyed me, and all had done their part in rendering my residence in that distant country as comfortable as possible. I had fared the best at the very spots where the greatest apprehension had been entertained for me—in the centre of the Caucasian and Pontic mountain ranges, which had such a bad notoriety for robbery. Of all my reminiscences, only those belonging to the country of the inhospitable Curds were not quite so pleasant as the rest. When

a Caucasian or Ossitian received me into his hospitable abode, with the words "Thou art master here, and I and my sons are ever at thy service," this was by no means a mere expression of politeness, as is so frequently the case among ourselves, but every member of the family was evidently striving to read my wishes in my eyes, and execute them immediately.

The words, "Master, permit me to drive our host's teeth down his throat," were addressed to me—on entering the first Georgian village which I reached after a lengthened stay in the then independent defiles of the Caucasus—by one of those handsome, I might say Homeric, fellows so frequently found in that country; and they caused me no slight embarrassment, for I was perfectly well aware that a Caucasian is ever prepared to execute a design with the same rapidity as he formed the idea. He had, on a former occasion, given me an hospitable reception, and killed a couple of pigs in my honour. But, in the present instance, I had only a couple of fowls and eggs placed before me, according to his feelings of honour, much too slight a repast for a guest who had come from distant Firengistan (Europe).

On another occasion, when I happened to notice a curious tree growing on a precipitous rock, and was on the point of cutting a few branches from it, my guide boldly interfered, and would not permit me to expose myself to the slightest danger. "Thou canst command my services when anything must be done which may cause thee joy, and willingly will I fulfil all thy wishes. But where I see danger for thee, thou owest me blind obedience, for I do not wish ever to be exposed to the reproach of not having properly watched over my guest." Soon after, the entire tree of which I had desired a specimen, was cut down, and laid at my feet. "Now choose, master, what thy heart finds pleasure in."

These few traits may be sufficient. But, at the same time, the historical importance of the country I was on the point of leaving, had always absorbed my entire attention. At the period when civilization was still fostered in Asia, the Caucasus formed the barrier which the neighbouring sons of the North could rarely scale; but, at the present time, the cold North cultivates the arts and sciences, and Europe serves as a model to the other quarters of the globe. Just as European civilization has already taken root beyond the Caucasian range, so —as many years before Christ's advent, as we now reckon from it—Asiatic cultivation had, on the contrary, penetrated

into the transmontane plains. Indian civilization flourished more than three thousand years ago at the north-western extremity of the Caucasus.

A celebrated traveller, Dubois de Montpereux, has tried, not without success, to transfer the scene of the wanderings of Ulysses to the Black Sea. It may be objected that the bard of the "Odyssey" would assuredly have mentioned the Dardanelles and the Bosphorus, if the said wanderings had taken place, not west of the theatre of the Trojan war,—namely, in the Mediterranean,—but to the north in the Pontus Euxinus; but, for all that, it cannot be denied that the author of the "Voyage autour du Caucase" has attempted, with considerable success, to prove his theory. He may, too, with equal justice object that, after all, Italy is not even mentioned. It is very questionable, also, whether the bard of the "Odyssey" had any close acquaintance with the islands and countries he sang, or whether he was not quite ignorant of their actual position. If we accept the theory of numerous bards having composed the "Odyssey," this will account for the geographical errors which have been indicated in that composition.

In fact, only two regions can be decided with precision—the country of the Lotophagi, whither a north wind impelled the wanderers, and the territory of the Cimmerians. The former is Ægypt, the other the Crimea and the whole northern coast of the Black Sea. It is well known that the ancients regarded Cimmeria as a gloomy country, veiled by mist and darkness, on which Helios never poured his reanimating beams. The ancients could not possibly transfer Cimmeria to the southern coast of France; and yet it must have been situated thereabout, if we consider Sicily to be the island of Trinacria. It is undoubted that this island once bore that name, and this might be the sole reason for assuming that Ulysses was driven by the winds from the country of the Lotophagi, or Ægypt, so far into the Mediterranean in a westerly course.

The Argonautic expedition teaches us that the ancients were acquainted with the Black Sea and its coasts, but we have no actual proof that they had any intimate knowledge of Italy or Sicily at the period of the Trojan war, or shortly afterwards. In addition, we must remark, that Circe, the sister of Æëtes, king of Colchis, lived in Æëa, and that Ulysses employed one day in sailing thence to the territory of

the Cimmerians. But if we place Æëa in the vicinity of Sicily, as is frequently the case, the bard of the eleventh book could not have had even the most superficial knowledge of the position of Cimmeria. Nor must we forget to mention that the sister of Æëtes would hardly live so many hundred miles away from her brother, but probably in his immediate vicinity.

On the coast of Cimmeria was the end of the deep river Oceanus, and the entrance to the subterraneous kingdom of Hades. It is probable that, three thousand years ago, the volcanic eruptions on Taman were of greater importance than they are at present; and this would easily give rise to the myth about the Pyriphlegeton, that stream of the nether world, which was a sheet of fire. Further, the tradition of the clashing rocks to the south of the Black Sea, and at the efflux of the Thracian Bosphorus, appears to be much more ancient than that of the rocks near Sicily. It is more than probable that the earlier bards of the Argonautic expedition understood by their Symplegades the same rocks to which Homer gives the names of Scylla and Charybdis. It is certain that they were transferred, at a later date, to the rocks in the straits of Sicily. As we said before, this hypothesis, which Dubois de Montpereux borrowed from a French philologist, is interesting, and deserves further investigation.

On board the vessel which bore me from Taman to Kertch, the eastern peninsula of the Crimea, there were several Cossacks, handsome young fellows, who recited their national ballads. The inhabitants of Little Russia, among whom the real Cossacks must be counted, are well known through the whole of Russia, not only for their love of melody, but also for their skill in song, and their peculiarly harmonious voices. In all the churches of the larger Russian towns, these men form the choir, and take the place of the organ with their chanting. But it is not merely the strength and compass of their voices for which they are distinguished, but rather the peculiar and melancholy tone, which speaks to the heart, and the piety and holy fervour which is more or less revealed in all their hymns.

I am only speaking of the true Cossack, who, even if he is not a lineal descendant of those on the Don or the Dnieper, at least traces his descent from the Ukraine, an ancient Cossack territory. The Cossacks of the earlier and the present period differ very materially. Those of the sixteenth and

seventeenth centuries played an important part in the eastern portion of the German territories. On the Don and the Dnieper, a band of active, enterprising men had collected, who afforded each other assistance and support. Like the Varagians and Vikinger in the North, they sat out in their light boats, and disquieted the proud lord of Stamboul in the immediate vicinity of his capital. Trebisond and Sinope were subjected more than once to their predatory forays; Cossacks menaced the sacred Serai of the then omnipotent Padishah, and plundered the suburbs of Constantinople. The haughty lords of the Morning and Evening Land, as the sultans called themselves, emerged victorious from every contest, treated every Christian nation with contumely, and—trembled before a handful of Christian adventurers! They, who threatened at any moment to inundate Germany, and even twice found their way to Vienna, could not check the forays of the Cossacks within their own territory. After one of these bold inroads, which even menaced Sultan Murad within his own sanctuary, the latter is said to have exclaimed, "The whole of Christianity trembles at my nod, and yet a band of Cossacks causes me sleepless nights!" The attacks upon the Turkish territory were even continued after the Crimea and the whole northern coast of the Black Sea, including the mouth of the Dnieper, recognised the sultan as their lord, and every possible effort had been made to check the Cossacks on the above-mentioned rivers, who received the name of Saporogians, from the fact that they lived on the other side of the waterfalls. In vain did vessels of war pursue the light-draught Cossack boats to the mouths of the smaller rivers, or to the swampy banks of the north. Even the two fortresses, Kinburn and Ortchakoff (Oczakov), which were erected at the mouth of the Dnieper, to prevent their ingress and egress, as well as the great iron chain which was placed across the stream higher up, were equally unavailing to check the forays of the Cossacks.

In the depth of night, the watchmen of the chain noticed the approach of the foe, and the hoarse sound of the cannon pointed at the imperilled spot was heard on either side. But it was not the tchaiks or Cossack boats that had shaken the chain, but large trunks of trees, which the bold adventurers had allowed to drift in front of them and receive the entire broadside; then the Cossacks approached gently and cautiously, and crossed the dangerous passage.

By day, they concealed themselves in the ozier beds on the marshy banks, or covered their boats with reeds, that they might escape the notice of their enemies.

The return was still more difficult, and through the watchfulness of the Turkish videttes, the passage up the Dnieper was rendered fearfully dangerous. In order to avoid it, the Cossacks generally went through the straits of Kertch into the Sea of Azov, and thence up the Don to the confluence of the Donetz. It depended on the state of the water how far they proceeded up this tributary stream. As soon as the navigation was found impossible, the Cossacks carried their light boats, which only consisted of a hollow willow or poplar tree, on their shoulders to the Samara, an affluent of the Dnieper, and thus reached their home, perhaps after three, four, or six months' delay.

I seated myself by the singers, and listened to their description of the deeds of their ancestors. The Cossack is justly proud of his history, which, unfortunately, is almost a sealed book to us. It would be truly worth the labour to collect the stories which are current among the people; for they would fill up many a gap in history. In the long winter evenings, the house-father likes to describe his own experiences, or what was told to him in his youth; and thus the history of the Cossacks is handed down from father to son. It is the same with the songs and ballads, which hymn the praises of the heroes of old and their deeds, and which would furnish abundant materials for the history of the country. The Cossack who narrated the story to me, became momentarily more animated; and from his description, it might be fancied that he had himself been witness of all he described. When he spoke of the night expedition, his voice was hushed to a whisper, as if the guardians of the chain might hear it. With their hands, he and his comrades imitated the splashing of the paddles on the surging waves: his voice grew louder when a storm burst upon the fragile barks, and hurled them back to the spot where they had, only so shortly before, escaped the Turkish spies. He seemed to clutch anxiously at the reeds, which were placed on board every tchaik for the purpose of concealment. But when he came to the assault, all the Cossacks sprang up with a yell, as if yearning to attack once again the place that was mentioned in the ballad.

At the present time, the Cossacks have become the border guardians of the exclusive Russian empire. They extend in

one long chain from the Polish-German frontier, and to the north of three immense empires—the Turkish, Persian, and Chinese—as far as the great Pacific Ocean; and while in the south they guard their huge fatherland from the inroads of predatory hordes, in the west they bar the way against the ingress of the productions of civilized Europe. But the descendants of the original Cossacks were not sufficiently numerous to guard such a widely extended position; so, in the course of time, the inhabitants of other districts of Russia, especially of Little Russia, have been employed for the purpose. But, besides these, even pagan, though warlike, tribes—for instance, the Bashkirs, Kirghis, and Kalmucks—have been converted into Cossacks, and not merely perform the same duties as the others, but have a similar organization.

I was sorry that, in consequence of my scanty stock of Russian, I could not understand all they said; but, fortunately, the master of the packet-boat was a German, and willingly filled up all that had escaped me. Thus time passed away even quicker than I desired. Gradually, the outline of the opposite coast came out in clearer relief, and we soon found ourselves in the crescent-shaped bay of the port of Kertch; but as the wind was right in our teeth, we had to tack a great number of times ere we could enter. The passage had occupied four hours.

For the first time after a long deprivation, I met again with an hotel managed in the German fashion. A German waiter took off my cloak on my entrance, and led me into a comfortably-furnished room. Only that man can truly recognise the comforts of an hotel, and the warmth of its welcome, who has been roaming about for a while among nations where inns do not exist, and where the traveller is driven to claim the voluntary or involuntary hospitality of persons who frequently have hardly enough for themselves. For months I did not know where I should lay my head at night: for weeks, no other food had been given me but sour milk, or a species of millet-gruel, innocent of either butter or salt.

Kertch is a new town, displaying a strange *mélange* of the Italian and Russian styles of architecture. Houses with flat roofs remind the traveller of the first; broad, straggling streets, and partially unpaved roads, of the latter. On the whole, the town is a more agreeable object than the generality of smaller Russian towns. It is said to contain about 10,000 inhabitants—a number which will certainly increase with

time. But Kertch has a prospect of acquiring greater importance when the countries on the Don are in a higher state of cultivation. At present, it is true, Kertch is the medium of communication between them and the south; but the produce of the Don countries is still too trifling to allow the export trade to be taken into consideration. The Cossacks of the Don, who occupy the more valuable portion of the lower Don, only grow as much corn as will satisfy their own necessities. Besides, they live very simply, and have few, or scarcely any wants; at least, as far as the lower classes are concerned. The material for their clothes is either homespun, or else obtained from the Russian manufactories.

In consequence of this, the chief trade is confined to the productions of the immediate neighbourhood, fish and salt, both of which are bartered for corn in the northern ports of the Sea of Azov. Considerable trade is carried on, for instance, with Taganrag, a town which, some twenty years back, promised to attain great importance, but has lost its value since Kertch has been rising. The salt is obtained from small lagunes situated to the south of Kertch, the largest of which are called Opuck and Tchocrek. Fish are dried and salted. Several thousand tons of the latter article are annually exported to the South of Russia. Caviare is also prepared. As the sturgeon here do not attain the size which they have at the mouth of the Volga and the Kur-Araxes, the caviare beads are smaller, but not at all inferior in flavour to that produced at Astrachan.

On the spot where Kertch now stands, several hundred years B.C., the town of Panticapæon, the residence of the Bosphoran kings, was flourishing. The pristine importance of this Greek colony only began to be recognised a few years back, when a quantity of antiquities was found to bear testimony to it; and it can only gain in renown, the more attention is paid to these relics. Unfortunately, the greater portion of these valuable witnesses of an early age have been removed to St. Petersburg, and placed in the Hermitage Palace. For my own part, I should have thought a collection on the site of their discovery much more suitable. I saw the St. Petersburg collection twice, and on each occasion admired its copiousness and riches. It is not in my plan to describe here what has been already found, or to give a history of the Bosphoran Empire; I will, therefore, only mention, in a few words, what I saw. It was very fortunate for me that Herr

von Blaremberg, the director of the Archæological Collection at Kertch, was an old acquaintance of mine, and willingly showed me all that was worth seeing. He imparted to me his plan which he had drawn up for the investigation of the country round Kertch in accordance with Strabo's description of the ancient Panticapæon, and it afforded me great interest, through the harmony between the description of that day and the present state.

Kertch is situated close to the haven, while the Panticapæon of Strabo was built upon hills. The Acropolis was in the foreground, and nearly in the centre; while the elevation on which it stood extended to the south of the present town, and was connected with a low range of hillocks. By means of a splendid flight of stone steps, we mounted the first elevation, upon which the museum for the less valuable objects, and those difficult of transport, has been built. It has a very pleasant appearance at a distance, with its portico; but, unfortunately, the requisite attention is not paid to its exterior, which is the more desirable, as the building, through its position, is greatly exposed to the influences of the weather. On reaching the summit, a magnificent view of the surrounding scenery was enjoyed. Accidentally, too, about fifty vessels, and among them a Prussian, had cast anchor here, which greatly enlivened the scene. To the south, and landwards, the heights themselves prevented any extended view, but toward the north a boundless grey steppe lay stretched out, which was only slightly broken by the primitive tumuli (Kurgan).

A quantity of broken pillars and mutilated sculpture lay in front of the building: more valuable specimens had been collected in a spacious room within. The most beautiful object, in my eyes, in spite of the injury it had received, was an Apollo's head, on whose cheeks a faint red tinge was perceptible. The rest of the marble was brilliantly white, and of an extraordinarily fine grain. I was still more interested in a large sarcophagus, also of marble, which had originally served as a case for a wooden coffin. It had been so mutilated, however, by the Turks, the former lords of this district, that the sculpture could be scarcely traced. On the lid there were two gigantic figures, whose heads had been barbarously knocked off.

Close by its side stood an elegantly carved coffin, of cedar wood, which reminded me forcibly of the German caskets of

the middle ages. A few ornaments, which I afterwards obtained from a Jew, I presented to the Archæological Museum in Berlin, as well as some sandals of most primitive construction. Several vases, which had more or less of an Etruscan style, bore a resemblance to our porcelain; and I was greatly pleased with a species of glass vessels, which were remarkable for their lightness.

But my attention was more than ever attracted by the skull of a boy, from ten to twelve years of age, which was in an excellent state of preservation. All the bones were extraordinarily thin, like those we should expect to find in a child of two years of age. It reminded me forcibly of the Makrocephali of Herodotus. Probably, however, it was the head of a diseased child. Still, it was curious that the skull had not grown wide in proportion to its length.

Among the numerous inscriptions which were collected here, and which, if I am not mistaken, have been published in Bökh's "Corpus Inscriptionum," was the one found on Taman, which proved with certainty that the Russian Grand Duchy of Tmutorokan, in the tenth and eleventh centuries, had its capital on the peninsula of Taman. Until this discovery its position was unknown, and Tmutorokan was even identified with Astrachan. This monument was the sole one bearing ancient Russian characters, for all the others had Greek inscriptions. This Russian principality, in the extreme south, furnishes testimony how far Russian influence must have extended at that time, when, at such a distance, the power of that country was not only established, but flourished. A grand prince defeated the Kasoghs (Cossacks—i.e., Tcherkess) and the Issenes (Ossenes, or Ossetians) in a decisive contest, and subjugated these tribes, which had hitherto maintained their independence.

In addition to these monuments, there were, in the museum at Kertch, a few *fibulæ*, rings and chains. Those I saw were of a bright yellow colour, and appeared to be made of the purest gold. There are Jews here who carry on a trade in antiquities, especially in coins, though more in private than publicly. Formerly, it was most strictly prohibited: but, through this very thing, much was sold to strangers which the Russians would gladly have retained, and which must have been of the greatest value in completing the St. Petersburg collection. Through the exertions of Herr von Blarenberg, however, the trade has been thrown open, on condition that all

the antiquities found must, in the first instance, be offered for sale to the museum. But the Jews do not yet quite believe in it. This circumstance, and my acquaintance with the director, were probably the reason that all the sellers assured me, by everything sacred, that, at the moment, they had nothing in stock of any value.

A fountain has been built, close to the port, out of several stones of slighter interest, which, apart from its antiquarian value, is a very pleasing object. Close to it, however, a quantity of inscriptions are lying about, to which no great importance is attached, through their mutilation and illegibility; but there are probably many among them whose preservation would be desirable for the sake of science. Unfortunately, there is not sufficient covered room to protect these objects from wind and rain.

On leaving the museum, I ascended the hill in front of the town, towards the sea, on which the Acropolis may formerly have stood. Few traces of old buildings are visible here, but, to compensate for that, a small modern temple occupies the highest spot. This temple covers the grave of a former governor of Kertch, Stammkoffsky by name. The most important excavations and researches were effected by this gentleman. Science owes to this talented man many a valuable discovery. It appears, however, as if the Russian Government of that day did not take such an interest in antiquities as the present one, for many valuable relics have disappeared. Stammkoffsky himself possessed an excellent collection of coins, which he left in his will to a friend at Paris. When the latter also died, the Emperor Nicholas purchased the whole collection at a high price, and so it found its way at last to the Hermitage, where it was placed to promote the interests of science.

The traces of a wall are visible behind this temple. I was told that a tower had stood here a short time before, and that the great Mithridates had occupied a castle there, from which he addressed his assembled troops. The hill is, consequently, called to this day Mithridates' hill. The stone, out of which the entire chain of hills is composed, is a very soft lime, of the latest tertiary period, which, through its peculiarities, has obtained the name of Kertch lime, but is generally called by us Steppe lime, and is frequently found through the whole of the Crimean peninsula. It is an excellent building stone, in consequence of being very easy to work,

and is for this purpose generally cut in long quadrangular pieces.

At the spot where Kertch now stands, there was without doubt a primitive burial-ground. A quantity of tumuli extend in a northern direction, but the majority of them have been so ransacked by Genoese, Tatars, Turks, and Russians, that only a few still display their original arrangement. According to Dubois de Montpereux, who has given an excellent description of them in his work, in the earliest Milesian period the graves were cut in the soft lime-stone. At a later date, the caves in which the coffins were placed were enclosed with walls, the stones of which, however, were not fastened together with mortar, and they were then covered with earth, so that a conical hillock was formed. A tumulus of this sort generally served as a burial-place for an entire family; and probably its height corresponded to the rank of the proprietor.

On regarding the number of tumuli, which extend for miles, and reflecting that the poorer classes were buried less expensively, and that their graves, consequently, disappeared in a very short time, so that the still existing tumuli must have belonged to the higher classes, we must indeed feel astonished at the prosperity and wealth of the ancient Panticapæon, the most northern Milesian colony. For centuries the mounds have been ransacked, in the hope of finding gold, silver, or other valuables; and still every year coins, fibulæ, and rings are being found, whose work demands our admiration in the highest degree. I saw in St. Petersburg ear-rings and bracelets, executed with such skill that they would bear a comparison with the manufactures of our first jewellers. The majority of the objects at present found seem, however, to indicate a degree of luxury among the ladies which we should not have looked for 2500 years ago in this retired nook of the then civilized world.

On the day when I inspected the tumuli, Herr von Blaremberg had sent out men to make some excavations. Unfortunately, the spots they selected were unfavourable, and nothing was found to repay their digging. As it seemed, the ground had been already turned up several times. The inner graves were found to be filled with earth, and even the bones removed from their resting-places. The powerful and haughty who lay buried here had hoped to hand down their memory to a later age; but they did not conjecture that their

bones would be polluted by the touch of profane hands. Such is the fruit of excessive pride and arrogance. No one disturbs the poor man in his simple grave; he returns to that dust from which he was formed by God's handiwork, without being exposed to human avarice.

I was greatly interested by the two largest tumuli, which doubtlessly owed their formation to kings, and eventually received their remains. In the largest of them was the marble sarcophagus of which I have already spoken. The hillock was about a hundred feet in height, and at the bottom its diameter was nearly a hundred and fifty feet. A narrow, very lofty passage, a hundred and forty feet long and ten wide, led to the inner square apartment, which was fifteen feet in diameter. Towards the top the edges were rounded off, but the whole terminated in a cone. Its height was about forty feet. The walls displayed no traces of any decoration. As, in addition, the vault was not at all remarkable for cleanliness, this grave made an extremely unpleasant impression upon me.

Kertch, with the whole small peninsula, at whose eastern extremity the town is situated, has a special viceroy, and during my visit, in the person of the Georgian Prince, Herheulidse. He possessed a great partiality for Germany, the country, as he expressed himself, of all invention and deep-thinkers. He devoted the greatest attention to everything which scientific researches brought to light there. His family was still more German. The princess, educated at Dresden, and who had herself become more or less Germanized, only spoke German to her children, and their education was also imparted in that language.

The prince at the same time took a delight in the surrounding country, especially as regarded its natural history. I saw at his house a very fine collection of minerals, chiefly consisting of petrifactions of the Kertch limestone, and polyps, which frequently formed mounds in the open country, resembling the tumuli. I was still more pleased with the shells, which appeared to belong to the Unio and Anadonta families, as they were partially filled with the most beautiful prisms of prussiate of iron. According to the prince, these shells are frequently found in the sand on the sea-shore, especially to the north, in the vicinity of a promontory, where a sulphur spring, with a warmth of 15° R., bubbles out from the top of a lime-

stone hill. Anatole de Demidoff states, in his travels, that no specimens of these shells are to be found in any European museum: but he is mistaken, for I sent several long ago to the Berlin Museum; and Dubois de Montpereux had also several of them in his collection. Not far from this spot there is a mud volcano, which does not differ in the slightest from those found in the peninsula of Taman. It is a very broad, but not lofty, hill, and the summit is of a rounded form.

CHAPTER II.

THEODOSIA (KAFFA) AND KARASSU BAZAR.

Pampas and steppe—The peninsula of Kertch and the promontory of Arabat—Tatars—Theodosia—Herr von Smitten—Kaffa—Turkish barbarity—Desolation of the Crimea—The houses and position of Theodosia—A German inn—Crimean wines—A medley of nations—The Jews—The nature of the soil—Flocks of sheep—Camels—Diligences—Karassu Bazar—Artisans—The Shirin rock.

On the 17th September I quitted Kertch and hastened towards Theodosia. The road winds in a due western direction through a steppe, interrupted by only a few insignificant hillocks. It is, however, very different from the steppes found in Cis-Caucasia, and bears an affinity to the American pampas. By this title is meant in South America a level, or, at the most, undulating surface, which is greatly deficient in water. From this cause, extensive vegetation is only visible at the rainy season, while in the hot summer the country is converted into a perfect desert, and can only support a few herbs and scrubby bushes, neither of which display the usual bright green hue of plants. The soil on the whole eastern side of the Crimea is composed principally of lime and marl, and belongs to the new tertiary or diluvian period. In addition, a very large quantity of salt, as is the case in all real deserts, prevents the growth of plants.

The steppe I was now traversing had a perfectly grey tinge. All the plants I noticed upon it had more or less the same gloomy colour, and, on the average, did not grow above a foot in height. There were very few varieties, but they grew in dense patches, and thus increased the monotony of the scene a thousandfold. Senecciones, asters, scabiosæ, malveæ, umbelliferæ, &c.,—plants which in Cis-Caucasia represented the vegetation of the steppes—were entirely invisible here. The most prominent was the saw-leaved horehound (*Marrubium peregrinum*, L., *β creticum*, Mill). This plant, with the gypsophila, forms the so-called Burian, which plays a great part in the ballads of the dwellers on the steppe, and in the stories of the children. I shall give an account

of the Burian presently, when I have an opportunity of giving as pecial description of the south Russian steppes. Next to wormwood, the white horehound (*Artemisia maritima*, L., *β taurica*, Bieb.,) is the most widely propagated plant in this neighbourhood. Its flower possesses an intensely aromatic smell, and is generally used by the Tatars as a vermifuge (semen cinæ). The vermifuge I saw in the Russian apothecaries' shops was different from ours, through the calix being rounder; but I cannot say exactly from what plant it was obtained. It is, however, most probably one of the numerous varieties of the *A. maritima*, L., which produces this medicament, so much employed in Russia.

Among the other plants which I found here widely diffused, I must not forget a centaury, with scrubby branches and small blossoms (*Centaurea diffusa*, Lam). It is also, at times, employed in the manufacture of Burian; and lastly, I have the narrow-leaved Hare's-ear (*Odontites rubra*, Pers.) to mention.

The conical mounds extend for several miles beyond Kertch. According to Dubois de Montpereux, they are not tumuli, but formed by polyps. At the first station, Sultanoffka, the country begins to undulate gently, and we approach the insignificant elevation, which extends for several miles in a westerly direction. Here was the frontier of the Bosphoran empire at a later era, whose possessions were principally situated on the other side of the Bosphorus. The elevation extends as far as the Sea of Azov, and forms there the narrow promontory of Arabat. Along it a road leads to the Russian continent, principally used by the traders of Kertch. Between this promontory and the actual Crimean peninsula lies the Putrid or Dead Sea, so called from its marshy and unhealthy waters, which emit unpleasant exhalations in summer. Large beds of osiers jut out into it, and serve as a summer haunt for a quantity of moor-fowl.

The elevation is more fertile than the plain which I had just passed over, and principally serves as pasturage for the numerous flocks of the Tatars. The Tatars, or Noghays, found here, differ materially from those on the northern side of the Caucasus, as they have retained their primitive conformation, both in features and person. They all, without exception, possessed a short and compact figure, a round swollen face, black but lustreless hair, and hardly any beard. Their eyes were turned upwards, like the Chinese, and the pupil could be hardly distinguished from the dark iris: the two

formed a far from pleasant contrast with the yellowish-white of the rest of the eye. The short and stumpy nose, the partially swollen lips, and the receding chin, like the short neck and the bloated limbs, did equally little to improve their bodies, which were generally not more than five feet high; and yet girls, from seventeen to twenty years of age, may be found, who, though not generally differing from their countrymen, not only lay claim to beauty, but even possess it. The general yellow hue of the skin has with them such a delicate hue, and seems to be tinged with a flush of crimson, so that it is not half so unpleasant as is the case with the elder Tatar women. Even the cat-like eyes, when you are once accustomed to them, and the mildness which their glances reveal, might gain the hearts of men of Indo-European origin. But when a young woman, however handsome she may be, has given birth to one or two children, all her charms rapidly disappear, and such a degree of ugliness is visible upon her features as is rarely found among Europeans. Women thirty years of age look as if they were matrons who had gone through much suffering. It is an interesting fact that these Tatars do not speak the dialect of their countrymen in the Caucasus, but have an accent only slightly differing from that noticed in Constantinople.

My friendly postillion drove me past the stations of Arghin and Propatchkaya to Theodosia. The postal arrangements in the Crimea, and wherever Prince Woronzoff has had the management, are excellent. Instead of the trough-shaped cart, a species of Holstein wagon is used. The seats are wanting, and the traveller is forced to recline on the straw, and make himself as comfortable as he can, with his luggage. The horses, too, are not curbed up so tight as is the case in the rest of Russia. It was evident that the German colonists in the Crimea had effected some good. In this the Crimean Tatars differ greatly from the inhabitants of Trans-Caucasia, where Tatars and Georgians live for years, in wretched filth and poverty, close to German settlers, and while daily witnessing their prosperity, accept nothing which would naturally improve their position.

As it is usual to travel alone, posting in Russia is not so cheap as may be fancied. On an average, the (German) mile costs eightpence, a price which I only pay in Germany for special posting, but for it receive a very different sort of comfort.

The sun was just setting when I arrived at Theodosia, and again found a very comfortable welcome at a German inn. For the first time, after many months, I saw a white linen sheet on my bed, and a pillow-case. In Kertch I had not fared so well, although there I had enjoyed a mattress and leather-covered pillow. What a luxury that is for a person who has so long been deprived of this cleanliness, the man cannot feel who has never quitted his own home. In the countries I had recently visited, even in the inns at Tiflis and in the Konaks, the guest is directed to a raised board as his couch, and he is left to arrange it in any manner he may think most convenient to himself.

To my great pleasure, I found at Theodosia, in addition to two Riga merchants, an acquaintance from Tiflis—Herr von Smitten. We soon arranged to travel in company. This was all the more agreeable to me, as a lengthened abode among perfect strangers, of whose language one only understands a few sentences, becomes at last wearying, and even disagreeable, more especially when the principal object of the journey is to reach home as speedily as possible.

Theodosia, or Feodosia, as the Russians call the town—for they always pronounce the Greek "Th" as "F"—is of quite recent origin, and owes its foundation to the Russians. But about 500 years B.C., a Milesian colony, which bore the same name, existed probably on the selfsame spot. It was, at one time, tributary to the Bosphoran kings, or the republic of Cherson; at another, independent, although it never acquired an importance equal to that of Panticapæon. In the first centuries after Christ's advent, the town fell into decay, and appears to have been utterly demolished at the earlier period of the Migration of the nations. In the thirteenth century, when the Mongols had taken possession of the Crimea, a town called Kapha, or Kaffa, was built on the same spot, which was soon after occupied by the Genoese. Under the protection of this powerful republic, Kaffa soon began to flourish to such a degree, that, within a century, it contained more than 100,000 inhabitants, and received the title of "the second Constantinople." Merchants belonging to Kaffa carried on trade to the furthest extremity of the Caucasian mountains, and even beyond the Caspian Sea.

From the thirteenth to the fifteenth century, this colony of the Genoese appears to have been in no way inferior to its metropolis in power and wealth; but in spite of that, its

viceroy was still appointed in Genoa. While that city wasted its strength in internal feuds, or repeatedly succumbed to the haughty and equally powerful Venetians, Kaffa extended its territory, so that gradually the most important ports on the whole southern coast of the Black Sea were in its hands. But the conquest of Constantinople by the Turks, in 1453, was the first omen of Kaffa's impending ruin. Nine years later, Trebisond fell into the hands of the same conqueror, Mohammed II. After thirteen more years had expired, the rich and powerful city of Kaffa surrendered to the foe of Christianity, almost without striking a blow in self-defence. With the exception of the Macedonian Alexander, the first Chalifes, and the later Mongols, there have been few monarchs who, in the short space of two-and-twenty years, so desolated three flourishing and powerful cities, of which two were the capitals of great empires, as did the barbarous Mohammed II.

Kaffa had voluntarily submitted and unconditionally. Its inhabitants hoped to escape the fate of Constantinople and Trebisond, and put faith in the promises of the Moslem; as if there had not been a sufficient number of warning examples of the most shameful treachery, and most despicable breach of faith! The city was spared, but 40,000 of the inhabitants were compelled to migrate to the desolated Constantinople, and 1500 boys were torn from their mothers, to become the minions of the Padishah and grandees of the empire. The new lords laid claim to all the slaves. Plundering was not allowed, but the wretched inhabitants were forced to give up the half of their property. But all this was only child's play to what took place during the next three years. The Tartar-Khan, Mengli Ghirei, who had been raised to the throne by the power of the Genoese, set the seal on the barbarities, in which the Turks had taken the initiative. Descriptions of that epoch surpass all that the imagination can depict; streams of blood were shed in the truest sense of the word. Ships, filled with Genoese gold and Genoese valuables, were sent to Constantinople. But the smaller villages and forts did what the foolish inhabitants of Kaffa had neglected. They defended themselves manfully against the masses of assailants, and prepared rather to die in an open, even if hopeless struggle, than accept the mercy offered them. The barbarous and faithless followers of Islamism were once again witnesses that Christians can die heroically for their

creed. A small body of men at Mangup defied the fury of a victorious tyrant and overwhelming numbers.

After everything had been plundered and carried off, and no more treasure-freighted vessels arrived at Constantinople from the once rich Kaffa, the haughty Padishah believed that it only required a sign from him, and the city would again become the emporium of Asiatic wealth. But, with the murder and expulsion of the Genoese, all trade had disappeared. Fruitless were all the concessions, which were once more bestowed on the city of Kaffa; where decay has once gained the upper hand, human will can do but little to check it. Within a few years every sign of civilization had departed from Kaffa. A mournful solitude took the place of the former scenes of activity. In the place of men, sheep occupied the coast-range, and fed on the herbs which sprung up in the uncultivated steppe. Now the Crimea has become Russian. Catherine II. was the first to recognise the immense value of the peninsula, and believed that she could produce its regeneration. With slight interruptions, the Emperors Alexander and Nicholas strove to restore it to its former splendour; neither sacrifices nor exertions were spared. But it progresses very slowly. History teaches us that cities once ruined, can never regain their former renown. Odessa was built only a few lustres back, and it has a prospect of ultimate success. Odessa has already monopolized the entire trade with Southern Russia; and despite its unfavourable situation, no town on the whole extensive coast-range of the Black Sea can pretend to rival it, but all are more or less dependent on Odessa.

Theodosia's fate is the same as that of Taganrog; thirty years ago all possible care was devoted to its mercantile development, but suddenly Kertch was fancied to be more favourably situated; and so the attention of the government was diverted to that town.

The allies have now recognised the value of the Crimea in a political, as well as a strategical, sense. Severing the Crimea from the Russian Empire, in spite of its slight value in a mercantile or agricultural respect, is like cutting through the artery by which she maintains her preponderance in anterior Asia. Russia's efforts are directed to the south, and Peter the Great was the first to recognise this fact. To gain ground there, Catherine II. undertook expensive and dangerous wars. It is known only too well in St. Petersburg that the Empire of the East was once offered to a Russian grand-duke.

Time will tell us what successes the allies will meet with in the south.

Theodosia is incomparably more valuable than Sebastopol for commercial purposes. A convenient road leads to the interior of the peninsula, which is more accessible to cultivation in the east than in the west. The Don pours its waters into the neighbouring Sea of Azov; the mouth of the Kuban is still nearer. A connexion with the mountaineers hostile to Russia can be easily maintained. All these are motives which render the occupation of Theodosia of especial value to the English; and it must be remarked, in addition, that from the elevations that surround it, it could be much more easily defended against a land force, than is the case with Sebastopol. But, for all that, the occupation of the Crimea, or even of a single point in it, would cause the English and French extreme difficulty.

Theodosia produces a more pleasant effect on the visitor than does Kaffa, from the fact that it is not built in such a straggling fashion. The houses extend round the spacious haven in the shape of a crescent, and are built after the Italian model. Without exception, they have covered passages or balconies, and flat roofs. The streets are generally wide, and paved all over.

While the sea begirds one side of the crescent, the other is protected by a connected chain of hills. These belong to the eastern watershed of the Crimean coast range, and are composed of marl and lime, also belonging to the tertiary formation. Unfortunately, they are all entirely barren, and of a greyish tinge; and yet, history tells us of the magnificent gardens belonging to the rich Genoese. The ancient Kaffa could not possibly have been restricted to the space now occupied by Theodosia, and it doubtlessly extended over the hills far into the steppe.

No relics are seen of the ancient Greek epoch; and, according to the statement of the inhabitants, none have hitherto been found. The Greek antiquities preserved in the museum of the town, were discovered at Kertch, and elsewhere. The monuments belonging to the Genoese period are, on the other hand, extremely valuable. Unfortunately, the government has only very recently commenced to pay attention to other than Greek antiquities. Ruins are still visible upon the hills, which form the two extremities of the crescent round the town. The tower, on the side looking towards Kertch, though

small and of no great height, has walls of extraordinary thickness. On the opposite side, the ruins are not in such a good state of preservation, but appear to have been of greater extent.

Our hospitable host set an excellent dinner before us. I had heard so much about the Crimean wines, that I was curious to form the acquaintance of the juice of the grape, which was expressed so near our present abode.

"What wine would the gentlemen like to order?" was the host's reply to our query. "Would you prefer Forster Traminer, Johannisberg, or Leisten wine? Or, are you less patriotic, and give a preference to the French, Spanish, or Cape vintages? In that case I could recommend you a Bordeaux of excellent quality."

"We do not want foreign wines, dear fellow-countryman, but Crimean," we replied.

"I see, gentlemen," mine host again remarked, "that this is your first visit to the Crimea, or else you would be aware that all the wines I have quoted are produced from grapes that have ripened in the Crimea. Our proprietors of vineyards have procured, at a great expense, every variety of grape from every country, even from America, but always call the produce after the vine on which the grape grew. Thus, my Hock was not made on the Rhine, but on the southern coasts, and from vines which, as I said, were procured from the banks of the Rhine. As Count Woronzoff (he was not Prince at that time) grows the best wine, we are accustomed to call every good wine 'Grave,' even if it was not made in his vineyards."

Thus instructed, we drank in turn all the more celebrated sorts: Johannisberg, Stein wine, St. Jullien, Champagne, Madeira, Cape, and found them by no means unpleasant tipple, especially for a man whom a lengthened residence in Asia had not rendered over-critical; but they did not bear the slightest resemblance to the varieties whose names they bore. The only thing they had in common was the price, for wines costing two roubles assignat (about 1*s.* 8*d.*) a bottle, were not even decent. For the better sorts we paid a silver rouble, or above three shillings.

Although the number of nations represented in the Crimea is not so large as on the Caucasian isthmus, still every stranger would be surprised at the varieties of costume which are to be seen in Theodosia. In the towns, and, consequently, here,

the officials are, with few exceptions, Russians; but the richer merchants are Greeks and Armenians, at times Italians; the poorer traders are Jews, and the artisans generally Germans. Besides these, a few gipsies are visible now and then. The original inhabitants of the Crimea, the Tatars, who, in the vicinity of Theodosia, and on the whole of the champaign country, have the same features and appearance as those I recently described, with a few exceptions, to which I shall refer presently, wander about with their sheep and oxen to the last moment, and pass the winter in wretched villages. Since the Russians have taken possession of the Crimea, the Tatars have given up a portion of their land—and that generally the best—to foreign settlers. Thus, among others, a quantity of Jews have been deported from the interior of Russia, and these poor fellows, who fancy that they are only born to trade, and in Russia shun any manual labour even more than is the case among ourselves, are forced to devote themselves to agriculture, an occupation for which they entertain the greatest repugnance. The Russian Government hoped that they would be reclaimed from their vagabond life by settled employment, but the children of Abraham are gradually creeping into the towns, and will soon become an insupportable burden to them, as is the case through the whole of Western Russia, wherever they have congregated. In the neighbourhood of Theodosia a few German colonies exist, which have only recently began to flourish. They can be always recognised at a distance by their carts, which appear really graceful when seen by the side of the clumsy native wagons.

After dinner we continued our journey to Simpheropol, the chief town of the Tauric government, and accomplished the entire distance of one hundred and eight versts in no less than eight hours. Simpheropol is situated to the north of the Crimean mountains. On our journey thither we left them to our left, and entered once again the open steppe. I had read so much and heard the more about the fertility of the Crimea, that I could not, in fact, believe my eyes when, on the road through the centre of the peninsula, I saw, instead of fertile, cultivated soil, the most gloomy-looking pampas, extending nearly in every direction. In truth, the tract of land between Theodosia and Simpheropol does not even deserve the name of steppe, at least, not in autumn. Even if the soil in the peninsula of Kertch was of an ashy grey

most unpleasant colour, this was much more the case in the centre of the Crimea. Although I noticed here the same plants I had seen before, they appeared even more stunted, and were not in such large clusters. In addition, it must be remarked, that the nearer we drew to Simpheropol, the soil became composed of a dazzling white and very friable lime, and was only covered in patches with a thin crust of arable earth. Through wind and rain the surface had been rapidly dissolved, and a fine dust was driven in our faces by the breeze. Beside the circumstance that the sight of such a dazzling white surface has a most unpleasant effect on the eyes, the lime dust floating in the air is the more painful, as it easily causes a long-enduring inflammation. Even the inhabitants of the steppes, though accustomed to it, are affected, and that epidemically, by the so-called Ægyptian ophthalmia.

Wherever a spring gushed forth from the ground, the prospect was more pleasing and verdant. But such fertile spots—real oases—are of no service to the Tatars, the original owners of the Crimea, for, as they had no permanent residence, the Russians declared it to be unowned land, and seized it. Russian gentlemen occupy these oases as estates, or merely as farms.

Here and there flocks of sheep of a thousand or more met us; but the sheep had not by any means that healthy appearance which I noticed in Cis-Caucasia among the Noghays, and appeared to have more or less degenerated. As regards size, they took an intermediate position between the so-called fat-tails and the present Russian steppe sheep. The tail was only covered with fat at the base, and grew gradually thinner towards the end, so that it had the form of a pyramid. The majority of the sheep were of a dirty yellow colour, but many were spotted with black, or altogether of that colour. I saw none of the formerly so celebrated Crimean sheep, from which the Krim fleeces were obtained. The cattle, however, appeared to be in a more satisfactory condition. They were generally smaller than those on the Kuban, but were of the same bright chesnut colour.

I was very much delighted at seeing in the valley the really beautiful camels. The specimens I had hitherto seen in Georgia and Cis-Caucasia were more or less ugly. Whenever I saw caravans consisting of camels and dromedaries, the fable of the discontented horse, that was converted into a camel, always occurred to me. Here, however, the greatest

possible care seemed to be devoted to the camels. Dromedaries, that is, camels with one hump, which Anatole Demidoff and his band of *savans* are the only persons to mention, I saw neither here nor on any occasion afterwards. I would, therefore, conjecture that the statement originated in some mistake. Their hide was of a regular pale brown; a fine mane fell down from their necks between their fore-legs, and was undoubtedly very carefully attended to. The hair was rather curly, and seemed to me much softer than any I had hitherto felt. It is universally used as wool. The women not only spin it, but manufacture it into clothes and other stuffs, which are left of their original colour.

In the Crimea, camels are only employed as draught animals. The custom prevalent among the Calmuks of hanging baskets on both sides, in which their children and luggage are placed when travelling, I did not see any where in the Crimea. Without doubt, their healthy appearance may be attributed to the fact, that these useful beasts are not loaded with any heavy weights, which would gradually wear the hair off, and generally are well fed. The carts (madgiars) are, like those of the other Noghays, two-wheeled, and have the shape of a regular oblong. The wheels are frequently from six to seven feet in diameter, and turn round the axle, not, as is usually the case in anterior Asia, along with it. But the Tatars are as little addicted to greasing their wheels as are the nomadizing Asiatic nations. A creaking, which to European ears is insupportable, echoes across the illimitable plains when the carts are set in motion. The cause lies in religious superstition, through which, on the one hand, honest people have no reason to wander about in silence, and be afraid of their own voice; and, on the other hand, the Mohammedans dare not use pig's grease, and sheep or ox fat would not answer the purpose so well.

The Tatars of this district appear to be more industrious than their fellow-countrymen beyond the Caucasus. They have built in the German fashion a species of covered cart, and keep up with them a regular communication between Theodosia, Karassu Bazar, and Simpheropol. For a few pence they will carry a traveller an immense distance.

On the road to Simpheropol lies a Tatar village, which is said to contain 15,000 inhabitants. It derives its name from the stream on which it is situated, the Market of the Black Waters (not red, as Kohl has it), for such is the meaning of the Tatar word Karassu Bazar. The traveller finds himself

here suddenly transplanted to the heart of Asia, even more than is the case in the Georgian and Trans-Caucasian villages. Catherine II. left the Tatars only two places, Karassu Bazar and Baktchi Sarai, in which they could live after their own fashion without impediment. Until the present time, the promise of the great empress has been kept sacred, and only Tatars are allowed to inhabit these two places. Karassu Bazar, in fact, reminded me forcibly of Trebisond, at least of the inner town. Narrow and crooked streets, through which it is just possible to pass, are found here. Lofty white walls exclude the prospect of the courtyard from the street; behind them lies the abode of the family and a garden, in which the female members can enjoy the beauties of nature without being watched by strange eyes.

Karassu Bazar is rich in mosques, of which there are said to be two-and-twenty, and in minarets, of which I counted seven. The former were generally large square spaces, and their exterior only presented a white surface of walls; but the latter were extraordinarily tapering and elegant, and had a very peculiar and pleasant effect as they rose from the clusters of houses and the fresh verdure of the gardens. Such a Tatar village is indubitably more picturesque than a Russian town, where the generally large and handsome churches and steeples leave a by no means pleasant impression through the gaudy colours with which they are painted.

In the same way as at Tiflis and other Eastern towns, the male population in Little Tatary—for thus the Crimea and a portion of the northern coast of the Sea of Azov were called, as late as the end of the last century—lead a public life. All the artisans work in the streets, or at least in their open booths: those of one trade sit together, so that the shoemakers, the tailors, &c., form separate rows. The former are justly celebrated, and their shoes are in great demand, principally among the Mohammedans. But other descriptions of leather-work are excellently manufactured here. Karassu Bazar produces famous sheaths for kindjals (the chandjar of the Turks) and knives, which in the last century were in demand all through Asia.

Karassu Bazar is situated at the southern extremity of the Crimean coast range, which gradually slopes away in a northerly direction, so that the ridge can be almost imperceptibly ascended here. With the exception of an insignificant elevation, from four to five hundred feet in height, and

about three miles in length, only small hillocks are visible, or rather, an undulating plain. The above-mentioned elevation, however, like the principal mountain chain, is only steep on one side, while from the other it can be scaled without difficulty. The Tatars call it, from the calcareous stone of which it is composed, Akkaya; but among the Russians it is known by the name of the "Rock of Shirin." The most respected and the richest Tatar family, which alone was suffered to enter into a matrimonial alliance with the daughters of the Tatar Khan, bore the name of Shirin, and held all the country in the east of the Crimean peninsula. The powerful chieftains of this family, trusting in their power, frequently rebelled against their lords, the Tatar Khans. Then the Shirin summoned his vassals and retainers, and a consultation was held on the white rock, which rises majestically at this spot.

TATAR PEASANTS.

CHAPTER III.

SIMPHEROPOL.

The Tauric hotel—The government—The Tatars—The Sultan Kalga—Sahinghirei — Akmetjed—The new town — The cathedral — The bazar—A Courland Jew—Cattle—Fruit and orchards—The valley of the Salgir—Apples—Herr von Steven—Herr von Hübner—A Russian labourer—Tatar regularity—Departure—Character of the country.

AFTER a short stay in Karassu Bazar we commenced our journey, and soon arrived at Simpheropol. We stopped at one of the four inns, which bore the proud title of the "Tauric Hotel." I do not know if it is the same in which Kohl, the talented author of "Travels in Southern Russia," and many other similar works, put up his tent; but, from his description, I think it might have been the same. Though the hotel looked so grand externally, and displayed such a fine

frontage, the internal arrangements did not at all correspond. We were conducted into a room, which the chamberman—there are no chambermaids here—had not cleaned for many weeks. On the table lay such a dense coat of dust that I could have written my journal upon it with my finger. Nor had the waiter the slightest intention of removing the dirt: on our giving a gentle hint to that effect, he naïvely replied that this did not belong to his department, for the chamberman attended to such matters. In the place of beds, we received a mattress, though without any counterpane or blankets. Many men must have slept upon it since the period when it was last cleaned.

In regard to food, again, we sadly regretted our host at Theodosia. All was heartily bad and dear. For a pot of villanous coffee we paid no less than one rouble, forty kopeks, (assignat), or about one shilling and twopence. It is a peculiarity not alone of Russian hotels, but also of German, that the prices are generally in an inverse ratio to the excellence of the fare set before you.

Simpheropol is the capital of the Tauric Government, in which, in addition to the peninsula of the Crimea (but, as already stated, exclusive of the distant portion in the east, consisting of the peninsulas of Kertch and Yenikaleh), the northern coast of the Sea of Azov is included. It contains the so-called Little Tatary, or the possessions of the Tatar Khans in the last centuries of their existence. The majority of the Tatars, however, quitted their fatherland on the occupation of the Crimea by the Russians in 1783, and found shelter, some among the Tcherkess, who had formerly recognised their sovereignty, and others among their brethren in Bessarabia. Scarce a third of the former inhabitants remained; but, spite of the exertions of the Russians, they have only partially given up their vagabond life. When their attention is drawn to the advantages of agriculture, they usually reply—"My father led a nomad life, and was happy: and I will do the same;" or, "As God gave the Franks sense, the Russians the plough, and the Armenians the counting board, so He has bestowed the wagon upon us."

Simpheropol was formerly called Akmetjed—i.e., the White Church. I am not aware why the Russians did not simply translate the name, but selected in its stead the Greek title of Simpheropolis, which, according to some, means the useful,

with others, the double, city. In the period of the Tatar dominion it was the residence of the major-domo, the Sultan Kalga, while the Tatar Khan held his court at Baktchi Sarai. The Sultan Kalga was an important personage, for when the khan was absent or ill, he took the reigns of the government in his hands; and, as he had to affix the seal to all the orders and regulations of the khan, he exercised a very considerable power, which, however, he never perverted. Through this the Tatar major-domo differed materially from the steward of the Frankish kings, who thirsted so long for the supreme command until he seized upon it. When the Sultan Kalga was absent, or on sick leave, he had a representative in the Sultan Nureddin. The princes and princesses of the reigning family were distinguished by the title of Sultan.

Of this family, which is lineally descended from Ghenghis Khan, and bears the name of Ghirei, only one member is now living in the Crimea. Sahin-Ghirei, the last khan raised to the throne, and maintained on it by the Russians, grew at last wearied of the internal dissensions which injured his country and nation, and yielded his sovereignty into the hands of Catharine II., in the same way as George XIII., at a later date, in Georgia, though more compelled by circumstances than voluntarily; but, in spite of that, the Russians were compelled to conquer the country inch by inch. The poor Sahin-Ghirei found no peace in his own land, and retired to Constantinople. There the former vassal was naturally received in a very unfriendly manner, and sent to the Isle of Rhodes, whither magnates in disgrace generally proceed. After a short while, the unhappy man received, as a special mark of favour, the silken cord—that is, according to the Turkish ritual, he was forced to take his own life with it. The former Anti-Khan, Selim Ghirei, fled, with all the chieftains of his empire, to Circassia, and did much in maintaining the deep-rooted hostility of the inhabitants towards the Russians. Only one member of the reigning family remained behind. His son is still living, but in extreme seclusion. He is married to an Englishwoman, and his children are brought up in the Protestant faith. One of his daughters is married to a Herr von Gersdorf, if I am not mistaken, a native of Silesia, but in the Russian service.

A strange destiny! the last of the fanatic Ghenghis Khanides, the arch-enemies of Christianity, who more than once threatened the annihilation of all Christians, himself a Chris-

tian, and, though surrounded by the devotees of the only beatific Russo-Greek church, himself a Protestant, and wedded to a Protestant! Suppose the Allied Powers restored the ancient Tatar kingdom, in a new Christian form, and restored his inheritance to one of the present Protestant descendants of Ghenghis Khan! That would be at least a settlement in which the rulers of France and England would clearly display their disinterestedness in the present war. As a Greek empire in Constantinople would have no prospect of endurance, a Protestant kingdom in the Crimea—whose wings, however, should not be purposely cut, as is the case with modern Greece—would form the best obstacle to the Russian influence in the South, and perhaps give fresh strength to decrepid Islamism.

Simpheropol, at the present time, contains 8000 inhabitants, and 300 houses. As the residence of the highest government authorities, it has acquired an importance to which it owes its rapid growth. It consists of two portions, the old Tatar town, which still possesses the name of Akmetjed, and the Russian new town. Both form the strangest contrast to each other. Narrow, crooked streets intersect the former. The houses either have their rear turned to the street, or stand in the centre of a court-yard, which terminates in a garden, planted with bushes and trees. With the exception of the part where the artisans sit, work, and sell, all is quiet and silent. Only very rarely do we meet a Tatar or a child, much less a female, who, however, is wrapped up in a white domino, which conceals her whole figure, but generally takes a quiet glance at every stranger who loses his way in the deserted streets.

The new town, on the other hand, possesses large, broad streets, which, although not completely paved, are at least macadamized, and generally one-storied houses. The breadth of the streets, unfortunately, is not in any proportion to the height of the houses. From this it arises, that, although the Russians are so fond of walking about without doors, the streets generally appear empty and deserted. In addition, the large squares, which have some meaning in towns with tall houses, augment the unpleasant effect.

With the exception of the new cathedral, no particularly handsome buildings struck me in Simpheropol. The former, however, is built in the form of a regular cross, and has an arched cupola in the centre. The pictures in the interior of

the church are all very poor, and, consequently, have no artistic value. In the neighbourhood is the quadrangular obelisk of the hero of the Crimea, the Prince Dolgurucki Krimskoi. On one side of the obelisk is the portrait of the prince, carved in marble; on another, his armorial bearings; on the third, the Russian eagle; on the fourth, the victory of Christianity over Islamism is represented by a Tatar baptism. The stone from which the obelisk is cut is greenstone, a variety frequently found on the southern coast.

It was Friday on which we lounged through the streets, one of the two days in the week on which market is held. Simpheropol is the emporium not only for all the productions of the neighbourhood, but also for foreign wares. The favourable situation, just about the centre, though somewhat to the south, renders it the natural *rendezvous* for all the inhabitants of the plains, as well as of the mountains. A fine road runs hence to the southern coast, with which the town must necessarily be in constant communication, on account of the numerous châteaux and gardens there. Produce is brought here and bartered for other sorts. The Tatars had driven in camels, horses, sheep, and oxen for sale: the Germans offered vegetables, butter, and cheese; the Russians, corn and bread. A quantity of Jews were wandering about and trying to earn a trifle, however small, by all sorts of servile employment. A young fellow, of about twenty years of age, became our guide. He had been removed, with many more of his tribe, from Courland to the Crimea. He had been forced to turn husbandman, like the rest. He described to me the sufferings he had endured, in the most striking colours. He showed me his hands, that I might observe the blisters, which had come from hard work. At last, as he said, he could not endure it any longer; he had, therefore, run away this spring, when the field labour recommenced, and was now trying to earn his livelihood in Simpheropol. As usual among his co-religionists, it was horror of work which caused him to become a vagabond. Although the complaints against the Jews in Germany are frequently unjust, still it is unhappily true, that the Polish Jews are the curse of the land in the Polish and southern provinces of Russia. Before this mischief is utterly extirpated, all the exertions of the government to improve these provinces will be useless. The Jews will only become agriculturists when they are removed to a country where they are left to themselves, and have no chance of driving a trade.

I found instances in Caucasia, that the Jews could become good husbandmen.

The Russian government has frequently been accused of harshness and cruelty, for compelling the Jews to give up their old manners and customs, and then settling them in uninhabitable districts. For my own part, I cannot acquiesce in this charge, although an involuntary removal may appear very harsh. Any one who has lived any length of time in Poland, Lithuania, and the other Russian provinces where Jews are to be found, and has watched their behaviour, will certainly agree with me. The Russian government owes it to the non-Jewish inhabitants of those provinces to protect them against the repeated annoyances and acts of oppression on the part of the Jews. In entire provinces, it is rare to find a single Jewish family which supports itself by the labour of its hands; for, with a few honourable exceptions, they shun work like fire, and hang like leeches to the other better inhabitants, from whose industry they gain an easier means of support. As a general rule, they carry on an advantageous traffic in all sorts of trifles, and act as agents to the common man, who, in Poland and Russia, is on the lowest step of the social ladder. But it is no honest trade that they carry on with the honest, though generally stupid, peasant; and they employ every possible scheme to gain profit. Cheating is the most usual resource with them. As the Jews are the only persons who possess any ready money, the peasants, when they require that useful medium, are compelled to apply to a Jew. They must pay interest, amounting to an almost incredible amount, or give up for several years their cattle or their produce. At the same time, the Jews are generally the farmers of the distilleries, and thus have a direct effect in demoralizing the nation.

The cattle which were offered for sale in the large market-place, appeared to me very poor; the horses were really bad, and very high priced. The sheep looked rather better. Camels were also brought for sale, and were offered at from 400 to 500 rubles (assignat) a-piece—or from eighteen to twenty-two pounds.

I felt the greatest interest in the fruit, which was principally brought to market by Tatars. Through the whole of Russia, Crimean fruit is spoken highly of; but what I saw here by no means came up to its reputation. The exterior of the apples, more especially, did not at all correspond to the interior: on

cutting one, I was surprised at the coarseness of the grain. Without exception, the delicate and exquisite flavour was wanting, as well as the aroma, which our apples possess, more or less. It seemed to me as if the proper attention was not devoted to the trees. I must, however, add, that this reproach does not affect all the proprietors of gardens and orchards, for I had afterwards frequent opportunities both of seeing and tasting very excellent fruit. The pears were still worse than the apples, and did not seem to me any better than our wild varieties. On the other hand, I was much pleased with the water-melons, as is the case through the whole of Eastern Europe, though not so much with the sugar-melons. The better sort of the former has a pinkish meat, and is principally grown in the vicinity of Taganrog. Thence they are exported in every direction, even to St. Petersburg, Moscow, Constantinople, and Smyrna.

But though the fruit offered for sale in the public market dissatisfied me so much, I found it most excellent in the orchards of the Herrn von Steven, Mühlhausen and Hübner. It was, in truth, a pleasure to walk about their magnificent grounds. In no instance did I see any dead wood, or interlacing of the branches on the trees. The trunks were all straight as a line, and appeared to me to be from fifteen to twenty years old. The orchards are principally situated to the south of the town, in the valley of the Salgir, the largest and almost solitary river in the Crimea, which receives its waters from the mountains, chiefly from the Tchatir Dagh (tent mountain), and disembogues into the Putrid Sea. This river here forms a deep cutting in the nummulite lime which covers the soil, while the town of Simpheropol stretches along the terrace lying to the north of it. There are orchards here of such a remarkable size, that, in a good season, the crop brings in several thousand dollars.

The Crimea seems to be the only country through the whole extent of Russia where the cultivation of the vine and fruit at all flourishes; and even here, it is confined to a few districts. In addition to the upper valley of the Salgir, fruit, principally apples, is only cultivated in the vicinity of Sudak, Sebastopol, and on the southern coast. Tropical fruits are generally cheaper in St. Petersburg, Odessa, and the larger towns situated on the sea, than the better sorts of pears and apples. I do not believe, however, that our fruit is inferior to the Crimean, for, in fact, several sorts are not found there

which, among us, are considered the best. The German landholders in the Crimea pay as great an attention to the cultivation of fruit as may be found in any part of our country, and, consequently, their takings are very large. But just as the worst wine is drunk in the Champagne country, while the better sort is exported, it is the same with the Crimean fruit. Every good apple is carefully wrapped in paper by the grower, and packed in chests, which are laden on the heavy steppe wagons. Thus the fruit travels for 1500 miles and more in a northern direction. With equal care it is again unwrapped in Moscow and St. Petersburg. It may be easily imagined what a price a good ribstone pippin or russet would command in those towns, when we state, that a decent apple costs a penny in the Crimea itself. I am sorry that I was not able to procure any trustworthy details as to the export trade; but it can hardly be so considerable as is supposed. In the valley of the Saal, from Rudolstadt to Naumburg, more fruit is harvested than in the whole of the Crimea.

I was excessively vexed that state-councillor Von Steven, one of the most distinguished Russian entomologists and botanists, was absent on his annual tour of inspection. I had long felt a pleasure in the prospect of devoting a few days to an examination of his magnificent *herbarium*. Herr von Steven is thoroughly acquainted with the vegetation of southern Russia and of the Caucasus, through which he has frequently travelled. To him we are indebted, after the deceased professor of botany at Charkoff, Marshal von Bieberstein, for the first acquaintance with the Flora of this, until then, perfectly unknown region. Herr von Steven, however, is not merely a botanist, for he has acquired equal repute for his acquaintance with the Russian Fauna, and more especially with entomology. To this we must add his character as a most amiable man, who has aided with hand and word every traveller whose steps have been directed toward southern Russia; and he not only maintains a correspondence with the chief *savans* of Europe, but is always delighted to execute any commissions with which he may be charged.

I was excessively pleased with another family to which I had brought introductions, the more so as its head, Herr von Hübner, had studied in Germany—principally at Jena—and had married a Thuringian lady. I cannot, really, say which of us was more pleased than the other at the *rencontre*. The whole period of my limited stay on his estate in the vicinity

of Simpheropol was almost exclusively devoted to anecdotes and reports about our German fatherland. Herr von Hübner was also the owner of an orchard, which he had planted about six years prior to my visit, and which visibly flourished. His labourers consisted of a Russian and several Tatars. The former lived in such an extraordinary fashion, that it deserves description. While among ourselves servants are generally paid quarterly, in Russia every agreement is made *W'trät*—that is, for four months, or one-third of the year. The Russian gardener was very industrious during the whole four months, and at the same time lived so frugally, that he hardly would drink a single glass of wodka during the day. Bread, and a wretchedly thin schti, or borstch, was all he regaled upon. But as soon as the third of the year expired, his industrious fit was at an end too. He demanded his wages, which in the summer amounted to fifty or more dollars, and went off with the money. A handsome carriage, with a pair of horses (a peasant dare not drive with more), was immediately hired for several days, and a man-servant engaged. He went first for a drive with the beloved of his heart, or some good friend, and on such occasions he had not any lack of them. At starting, everything went on with the greatest order: the workman played the *grand seigneur*. He regaled his friends with the best edibles—always, however, accompanied by onions and the choicest vintages; above all, champagne was *de rigueur*. When night set in, and the number of his friends increased, things grew rather wilder; about midnight he was generally in a state of intoxication, which, consequently, put an end to the festivities. The next morning, when he had slept the liquor off, the same life recommenced, until the hour once more arrived when he became unconscious. In this fashion he carried on, as long as he had a copek in his pocket. When all his money was finally exhausted, he appeared the next morning, at the regular hour, in the orchard, went to work, and was as industrious as he used to be.

The mode of life among the Tatars formed a striking contrast to that of this low Russian. The money they earned they carried home to their families, with whom they spent all their leisure hours. Not a copek was expended away from them. The family life of the Crimean Tatars is said to be unexceptionable. I spoke to several persons who had an opportunity of forming an opinion by a lengthened residence in Tatar villages, and principally on the southern coast, and they all

agreed in this. The union among the different members, the love of regularity, the activity of the females and industry of the males, cannot be spoken of in too high terms. Herr von Hübner told me that a Tatar, on an average, does as much work as two Russians. On entering one of their villages on the southern coast, the first thing that attracts the traveller is the cleanliness of the streets and houses. Naked or ragged children are never seen running about, as is so frequently the case in Asia, both with Christians and Mohamedans. On the coast, the women do not conceal themselves so timidly from the sight of strangers, and their husbands treat them better, and not as merchandize, which is the case among their fellow-countrymen and co-religionists in Asia.

It was a lovely Sunday morning, when we were again seated in a post-chaise, and, drawn by a *troika* of three horses abreast, drove towards the former residence of the Tatar khans. Baktchi-Sarai is situated about four and a half versts* from Simpheropol. The road runs in a south-south-western direction, upon the steep northern slope of the Crimean coast-range; towards the western coast, at the outset, it passed over an uniform plain, covered with only a few plants; but the nearer we drew to our destination, the more undulating the ground became. Even small hillocks were visible here and there. A chalk formation soon assumed the place of the nummulite limestone, but in its external appearance did not differ in the slightest degree from the previous strata. The frequently blinding whiteness is not beneficial to the eyes; but this limestone is firmer than the younger formation, and does not dissolve so readily into that injurious powder, which is so insupportable at Karassu Bazar. Thus, then, between Kertch and this place I had seen all the various strata, from the latest up to the chalk formation. There the rocks were formed of steppe-limestone, with polyps, belonging to the latest tertiary or quaternary formation: at Karassu Bazar it was the common tertiary formation, whose place was taken at Simpheropol by nummulite limestone, belonging to the oldest tertiary, or, according to other geologists, to the latest secondary, period. Here, a still older stratum, chalk, had come to light; we shall soon meet with the Jura formation, and see that this again is covered with clay-slate.

At about half our journey, we passed through smaller

* A verst and a half make an English mile.

valleys, which were irrigated by unimportant rivulets. Another species of vegetation made its appearance here. It was neither that of the Crimean pampas, nor that of the steppes, which we shall presently describe, but a vegetation such as we find in Germany in limestone districts, and which possesses no distinguishing characteristics. The plants are more various, but no particular sort occupies a large tract of land. The grasses were certainly not equal in number to the herbs and plants, which were about a foot in height, and very bushy; but not a few annuals were to be seen. The banks on the roadside were generally overgrown, as with us. The vegetation seemed extraordinarily scanty on the hills, as the rain renders the deposition of soil impossible. To this it must be added, that the period of our visit was autumn, a season when even more fertile districts no longer possess the fresh verdure of spring and the earlier summer months.

The Tatars confirmed what I said of them a few pages back. The soil was partially cultivated, or, at least, put to a good use. It was evident that the inhabitants spared no trouble to impart to their fields the necessary humidity in summer, when rain never falls.

TATAR FARM-YARD.

CHAPTER IV.

The gorge of Tchurukssu—Dress of the Tatars—Kebabji—Ekmedji—The khan's castle—Hall of justice—Marie Podotzka—Fearful vengeance—The fountain of tears—Mausoleum—A Tatar burial-ground—Gipsies—A church on a rock—The Jewish fortress—Rabbi Solomon Beim—The Karaim—Followers of the Talmud—An historical sketch—The synagogue—The valley of Josaphat.

BAKTCHI-SARAI is not seen until reaching the entrance of the narrow defile in which it is situated. This capital of the Crimean Tatars, in consequence of its peculiar position, offers a very different aspect from Karassu Bazar, which is built in a plain; there is especially a great diversity in the style of

building and arrangement of the houses. The chalk limestone has here a deep fissure, through which a rapid stream, the Tchurukssu, runs. The sides of the fissure are very steep higher up, though they are more sloping at the entrance. As the breadth of the valley is only from 500 to 1000 paces, there is just enough room for a road and two rows of houses. It is evident that the latter can be of no great extent, at least in depth, but are of a modest size. Their back leans against the hill, whose side serves for gardens to the inhabitants, and is planted with all sorts of shrubs, but especially with fruit trees. In front there is frequently a court-yard, enclosed by a high wall. The houses themselves have flat roofs, instead of a gable, from which the two sides slope off at an acute angle. The roof is usually covered with hollow tiles. The tall chimnies have a very pleasant effect, as, seen from a distance, they harmonize with the taller and numerous minarets, and remind one not a little of Gothic architecture.

The Tatars in Baktchi-Sarai also differ materially from their countrymen in Karassu Bazar, and still more from those in the steppe, of whom I lately gave a description. Their dress resembles the Armenian. It consists generally of a long kaftan, made either of brown or blue cloth, which is open at the sides, and has tight sleeves. Their trousers are after the old Turkish fashion, but they are not nearly so wide, and are better calculated for walking or working. On their heads the Tatars wear a short cylindrical fur cap, about a foot in height; at the summit the cylinder terminates in a piece of red cloth, adorned with gold or silver braid.

Baktchi-Sarai extends for nearly three miles along the narrow valley. On both sides there are usually booths before the houses, in which the tradesmen work and offer their goods for sale. Their leather manufactures are, excellent shoes, kindjal sheaths, pletkas or riding-whips, &c., which are not only used in the Crimea, but are exported. There was much to remind one of real Turkish towns, especially the kebabji, those restaurateurs who prepare their good things in the public streets. A large copper kettle stands on a species of hearth, containing the mutton, which is rendered dainty by various condiments, more especially onions; when it is sufficiently cooked, it is laid on flat dishes and sold; as soon as one piece is taken out, another is put in. While the broth is not generally admired in Constantinople and other Turkish

towns, it appears to be eaten with great gusto here. I saw Tatars with little wooden saucers in their hands, who imbibed the contents with evident satisfaction, by means of huge spoons of the same material. For a few halfpence as much may be procured as would satisfy the most craving stomach. I also found the spit, schischlick, arranged here as is usual in the East. Boys twirled the wooden spit, which was covered with small lumps of meat, over a charcoal fire.

The ekmedji, or bakers, also prepared their various sorts of bread before the eyes of the consumers. Here, as in Constantinople, the small loaves were bestrewn with black caraways, or aniseed, which imparted an aromatic perfume to them. Lastly, the coffee-houses were the same; the guest's room was generally on the first floor, as the ground floor was a shop; a gallery running round the former allowed the smokers to enjoy their pipes in the open air.

At about the centre of Baktchi-Sarai is a cauldron-shaped valley, in which the former rulers of little Tatary built a palace. It is still standing in its original state, and is carefully maintained by the Russian government. A quadrangular monument, of no great height, stands at the entrance, and informs us that the great Catherine was here on the 14th (26th) of May, 1787. The architecture is peculiar, and differs from that of similar buildings I saw in the East. No regular plan can be traced. The apartments are generally irregular, and are not always connected, so as to form a suite. In this khan's chateau there is no idea of saving room, which is so frequently taken into account in our more modern buildings, and unoccupied spaces are continually to be met with. Carved work is very predominant about the windows, less so on the ceilings and doors; but unfortunately all has been painted of a bright red or green colour. The pictures on the walls were coarsely executed, and possessed no artistic value. Formerly, when the Tatar khans were still residing here, the floors were covered with magnificent carpets, and elegant divans ran along the walls; the *tout ensemble* may possibly have produced a different effect.

I noticed the chairs and tables which were in many of the rooms, and, in fact, were used by the last Tatar khan, Sahin Ghirei; but it was this imitation of European fashions which brought on him the hatred of his subjects, and principally caused the repeated insurrections, which he could only suppress by Russian help.

The Sarai was very extensive, and formed an irregular quadrangle. Formerly, it is said to have been still larger, before the Russian government pulled down a part which was unsafe. On passing through the narrow gateway into the court, on the right are the apartments of the khan and his family; to the left, the mosque and the mausolea; and in the rear, the offices for the servants, which, however, may be used as a lodging by any traveller who has good letters of recommendation. The apartments were of various sizes and shapes; in the larger rooms were fountains.

Further to the rear the hall of justice is situated. It is a round, lofty apartment, with a gilded roof. Very few windows let in light upon it; but when the judges had any important cause to decide, even these were closed, and the hall dimly lighted by candles, that nothing might impede or disturb the course of justice. The accused was heard, and, if found guilty, led off to the left to receive his punishment immediately; but if he was acquitted, he marched off to the right, and soon reached the public court, where he could enjoy his liberty. At times the khan had an inclination to judge for himself whether the judges were just in their decisions. For this purpose, a small room, or species of gallery, was built at the side of the hall, but so veiled by a grating, that no one in the hall knew whether the khan were present or not. Woe to the judge who did not decide in accordance with his conviction!

The harem was in the rear of the court-yard, and divided from the anterior portion by a high wall. It consisted of a garden, of no great size, in which stood a modest house, with four apartments *en suite*. Here lived the khan's four wives, generally in thorough seclusion. As a general rule, the lord of Little Tatary obeyed the Koran more closely than did the padishah, or the dignitaries of the Turkish empire. In addition to this enclosed space, a small garden, with a bath on one side of the main building, belonged to the harem. A narrow passage led straight from the khan's apartments to this garden; and there was a small room, from the window of which the bath could be surveyed. The proud lord of the Crimea liked at times to watch his wives at the bath.

In the upper part of the khan's residence, we were shown the apartments in which Marie Podotzka (Podocka), whose story the unhappy Pushkin has sung, is said to have resided. There is namely a myth, of which, however, history is igno-

lant, that towards the middle of the last century the Tatar khan made an inroad into Poland, and carried off the lovely daughter of the rich Count Podotzky. Dazzled by her charms, he attempted in vain to acquire her love. All his proposals were firmly declined by the Polish girl, who only thought of her friends at home, and knew no happiness. Marie received the best apartments in the whole palace, the handsomest clothes, and all the delights the East can offer were procured, to gain even a smile from the fair mourner. In the palace of a descendant of Ghenghis Khan, a Christian chapel was built, and Christian priests read mass. All was in vain. Marie remained silent and reserved. The more the haughty khan saw himself rejected, the more violent his love became. He, who had formerly only taken pleasure in predatory inroads, with whom war had become a second nature, who could shed streams of blood without a feature being moved, was now desponding, and traversed silently and thoughtfully the lofty apartments of his immense palace. No dissuasion or advice was of any use; he still strove to gain Marie's affection. Though continually repulsed, he felt that he could not live without the object of his love. The powerful lord of the universally-feared Tatars did everything which could cause pleasure to his beloved Marie. In her eyes he strove to read her slightest wish, and let no opportunity slip in which the follower of Mohamed's intolerant creed could pay the Christian girl any delicate attention. Marie saw this, and was deeply touched. Her hatred was gradually converted into respect; but she was not yet able to think, without a shudder, of giving her hand to the enemy of her religion, and the man who had torn her from her beloved parents and dear home. And yet even this rendered the Tatar khan happy; the traces of gloom gradually disappeared from his handsome, manly countenance. He yielded to a hope which would bring him nearer to the fruition of his wishes. Peace returned once again to his mind. At this moment, the frenzied deed of a jealous woman deprived him of the blessings he expected so soon to enjoy.

The khan had formerly given all his favours to a Georgian. The latter, jealous of her new and fortunate rival, determined to free herself and the other inmates of the harem from the detested favourite. She easily succeeded in gaining her friendship by false representations; but all her efforts to destroy the lovely Marie were in vain. At last the Eastern could no

longer restrain her hate; but one day stabbed the innocent girl to the heart with her dagger.

The Tatar khan had scarce been informed of the fearful deed, ere he determined that the guilty parties should suffer a fearful penalty for their crime. Like a madman, he wandered through the palace, and called in vain on the beloved Marie, whom he had hoped so soon to call his own.

All the women of the harem were executed, and the murderess torn in pieces by horses. Over the grave of his beloved, a magnificent mausoleum was erected, on whose steps, as soon as morning and evening returned, the khan wept burning tears of sorrow. Thus passed one day after the other, one week after the other. He knew no peace. But suddenly he collected his energies, and rushed again into the turmoil of war. Desolation followed his track; villages and towns were buried in their ashes, until the wretched man found the death he sought.

This story appears to be founded on that of the fair Georgian, Dilara Beke, as we have already mentioned that the history of Poland is ignorant of any Countess Marie Podocka, who was carried off by the Tatar khan. The story of the unhappy Polish girl is still, however, current in Baktchi-Sarai, and a mausoleum is pointed out, which the khan erected to her memory. This is situated, not within the palace, but in the large garden attached to it; and consists of a handsome arched cupola, without any inscription. In addition to this mausoleum, the sorrowing khan also had a fountain placed in one of his favourite apartments, which was intended to represent the state of his heart, and received the name of the fountain of tears, Selsebil. It is formed of several cascades in a pyramidal shape, one above the other. The water flows over the edge of the uppermost basin, into another larger one just below it. As this is larger than the previous one, but only contains the same quantity of water, it flows rather more slowly into a still larger one beneath. This process is repeated several times, until the lowest basin is of such a size, that the water can only flow over in the form of drops. These drops are intended to represent the tears which the ever-mourning khan shed nightly. According to some travellers, there is an inscription on this fountain which, however, bears no connexion with the above story. It runs thus:

"The countenance of Baghd-Sharai is brightened by the

beneficent care of the Krim Ghirei, the enlightened. His protecting hand has assuaged the thirst of the land.

"If there is any fountain like this, let it display itself. Damascus and Bagdad have seen many things, but never such a beautiful fountain. In the year 1167 (from the Hegira").

The burial-place in the courtyard near the mosque is small, but has a pleasant appearance, as all sorts of shrubs, with their refreshing foliage, and even fruit trees, at least peaches, grow in it. But the most celebrated khans are not buried here. With the exception of the two tall mausolea, which are also in the shape of a dome, the ground is only covered with simple tombs. Gravestones, with Arabic and Turkish inscriptions, told those who understood the language the names of the persons who lie buried here. The greater portion of the golden inscriptions on the two mausolea are probably sentences from the Koran.

When we had thoroughly inspected the palace, we hired a couple of horses, and rode through the remaining portion of Baktchi-Sarai, consisting of a single street, partly to see the upper, narrower, and more picturesque part of the valley, and partly to visit a celebrated Jewish fortress. In three quarters of an hour we reached the last houses, and passed from the abodes of the living to the burial-places of the dead. A cemetery among the Mohamedans has something cheerful about it, and never has that melancholy look so frequently noticed in our churchyards. Instead of the "Memento mori," and similar unpleasant imitations of the human skeleton, the traveller sees, among other cheerful beings, the friends and relations of the deceased, who do not at all give way to melancholy and mourning, but think joyfully of those who have preceded them, now removed far from all terrestrial cares, and enjoying the delights of Paradise. No lofty wall encloses the sacred spot, to protect it against insult or injury: the uneducated follower of Islam bears in his heart, even from his earliest youth, a reverence for graves which he never forgets.

The valley grew gradually narrower, and we arrived at a gipsy village. Though these neglected beings are everywhere such melancholy and even disgusting objects—and here, more than anywhere else, is this the case—still there is something peculiar, I had almost said, something that claims our respect, in this pertinacious adherence to old manners and

customs, no less than the love for a free and unfettered life, as well as the repugnance to the trammels of our civilization, which is frequently more pretence than reality, I am afraid. Indeed, the gipsies ought not to be regarded with contempt, as is so often the case among ourselves. Their earlier history, no less than their later, in Spain and Hungary, furnishes us with more than one instance of magnanimity on the part of gipsies, and a natural, healthy, simple manner of thinking which deserve ample recognition. Our State system certainly renders it necessary to put down gipsy life, but I will attempt to prove that even these men, who, according to our ideas, are so wretched and miserable, can have something good about them. Does the wild Beduin in his deserts live in any other fashion than the gipsy among us? We only regard the life of the former under its poetic aspect, while that of the latter is known to us in its nude reality. Nothing prevents the Beduin from satisfying his propensity for unbounded liberty, but the gipsy must always bow to the laws of that land in which he leads his erratic life. He is not the only person who lives on hedgehogs, rats, and mice, for in Arabia the Beduins also catch a quantity of such animals, and devour them without any culinary preparation. A desert rat has more than once caused a violent dispute in Arabia, even among the occupiers of one and the same tent.

The valley grows narrower, the rocks are very precipitous, and a sharp, in some places overhanging ledge, forms the verge of the uppermost plateau. On all sides, caves are seen in the easily excavated limestone, which were inhabited in those primitive times ere men learned how to build houses. In these the denizens of the valley were protected against the attacks of the dwellers on the steppe who lived under tents. In one of these caves, several years ago, after the Christian Cross had again expelled the Crescent from the Crimea, an image of the Virgin was found. The blessed discovery was soon bruited about, and its reputation waxed every year. Crowds came to gaze upon it, miracles were performed by it, and the annual concourse of visitors was thereby increased. Pious persons established themselves in the cave, and the gifts of faithful Christians soon enabled them to convert it into a comfortable chapel. But this at last became too small, and could not contain all the pilgrims who arrived, especially at certain festivals. They were soon forced to build an additional wing, and it now hangs on the rock like a

swallow's nest; and a gilded cross, which may be seen for a long distance, tells the wayfarer who passes through the valley that there is a sacred spot above. Any one who wishes to visit it, however, must not be given to giddiness, for steps are cut in the stone of the perpendicular wall, and ladders connect the various shelves. Any man whose foot slips is infallibly lost. It is extraordinary to me that no accident has yet happened. Although there are only a couple of priests resident, who perform service regularly in the chapel, the place bears the title of a monastery. Usspenskoi Monastir, however, does not mean, as generally stated, the "Monastery of the Rock," but rather, of "Ascension of the Virgin."

We rode further, and soon saw, on the opposite side to the monastery, the houses of the Jewish fort, close to the verge of the cliff, for such is the meaning of the Tataric "Dshufluth Kalèh:" a peculiar scene, which, however, reminded me of what I had noticed at times in Asia—on the top, houses, beneath them, caves, the oldest habitations of man. From this point the road grew so steep that we were forced to dismount, and go on foot. On arriving at the top, I observed once again the same small houses, or sakly, which I had seen so frequently in Georgia and elsewhere. By means of stones simply laid on each other, and not at all connected by mortar, the inhabitants of Dshufluth Kalèh enclosed a quadrangle, which they called their house, and covered it in with poles and willow-work, which received externally a coating of clay. The richer class, of whom there were more here than I generally found in the East, had employed the same style of building for their houses, but had divided the larger space they enclosed into separate rooms. The houses of the richest were even ornamented with a second story, in which the family lived, and which was reached by a set of wooden steps from without: the lower rooms, in such cases, served as store-rooms, and, in some instances, as cow stalls. Generally, however, the cattle were lodged in rocky cavities, which were easy of access. The house itself generally stood in the rear of the little yard, which was divided from the narrow, winding street by a wall.

We had heard so much to the credit of the rabbi of this place, Solomon Beim, that we did not hesitate in paying him a visit, and learning a great deal about his countrymen, who form a separate sect, and are known by the name of Karaites,

or, properly, Karaim. We had not deceived ourselves, for the rabbi not only received us with the greatest kindness, but even had the goodness to act as our *cicerone*. An acquaintance with several languages is not at all uncommon in the East. The rabbi was well versed in eight, and conversed with us in German. Although still young (he was scarcely thirty), he was regarded as a *savant* among his co-religionists, and in other quarters; and we perceived, during the first quarter of an hour, that we had no ordinary Jew before us.

The inhabitants of Dshuffuth Kalèh attracted my attention, for they differed materially from our Jews in face and person. Although of a short stature, their bodies were not at all stumpy. Their heads were rather round, instead of being long. Their plump and round faces, the features of which were not at all prominent, had nothing of the Jew about them. The Jews have generally a large nose, but in the Karaim this feature is small, but, as in the Greek face, forms nearly a straight line with the forehead. In their eyes, which are also round, there is a dark ring, which is scarcely separated from the pupil. The mouth appears to be remarkably small, and the chin projects very slightly. Their hair is black, but not so harsh as that of our Jews, but resembles it in being lustreless. The beard seems to be generally weak among the Karaim.

In their costume these Jews differ very slightly or not at all from the Tatars in Baktchi-Sarai; they only make a distinction with regard to cutting their hair, since the period that the Crimea has recognised the supremacy of Russia, for they no longer follow the Mohamedan fashion. Similarly they have all customs in common with them, save those which religion commands, and they speak the Tatar language. They principally live by trading, and have their booths in Baktchi-Sarai. Every morning they go down, and return home at nightfall. According to Herr von Haxthausen, whose valuable work, "Studien über die inneren Zustände Russlands," cannot be sufficiently recommended, the Karaim employ in the family circle a Tatar dialect which is more spoken in the East, namely, the Djaghatai.

The Karaim have recently attracted the attention of ethnographers, as well as of the Russian government. As I made it a point, in my travels through the Caucasus and Armenia, to obtain information about the Jews living in those countries, it may perhaps be of some value for me not to withhold my

views, especially as they agree in the main with those of Abraham Firkowitch, whom the Russian Government has specially commissioned to inquire into the condition and origin of the Karaim.

The Karaim differ from the other Jews, or so-called Talmudists, in their not recognising the Talmud, or later traditions, as a sacred book. In other respects they agree with them, but have many customs in which they disagree. The Karaim, like the Mohammedans, are allowed four wives; but cases in which a man avails himself of this privilege are very rare. Then again, in circumcision, they do not cut through the entire prepuce. In July they keep only one festival, while the Talmudists have two. And, lastly, in killing cattle, they do not employ the same formal regulations, in taking out the entrails, &c.

According to the latest researches, it is probable that the Karaim are descended from the Jews who were led away in the Babylonish captivity, and did not return home again. I had repeated opportunities in my earlier works to prove that Jews had settled in the east of the Caucasian mountains, principally in Daghistan, long before the destruction of Jerusalem, and that there are numerous traces that they maintained a connexion with their brethren who had returned to Palestine. I would, therefore, beg to refer any one interested in this subject to my "Travels through Russia to the Isthmus of the Caucasus," vol. ii., and "A Pilgrimage in the East," vol. iii.

If the Jews of Armenia and the Caucasian Isthmus had remained estranged from their fatherland long before the advent of Christ, the bonds, which must gradually have become loosened, were quite dissevered after the destruction of Jerusalem. All communication appears, in fact, to have ceased at a later period. The Armenian and Caucasian Jews retained the doctrine of Moses with the greater purity, as, in Daghistan more especially, there was no obstacle to their handing down their religion intact from father to son. But it was very different with those who remained behind in Palestine, and were expelled or expatriated themselves eventually; for, in consequence of their subordinate position, they accepted many of the rites of the nations among whom they lived, either voluntarily or under the pressure of circumstances. The cabalistic disputes among the Christians also had an effect upon the Jews, though in another fashion. The Tal-

mudic doctrine was principally developed in Judaism through the schools of Tiberias and Babylon, between the fifth and eighth centuries. Year by year it took deeper root, and finally attained a complete recognition. Naturally, the Talmudic doctrine had remained unknown to the Jews in Armenia and the Caucasus, the more faithfully the latter had adhered to the primitive Judaism. The same may be predicated of all the followers of the Old Testament, who, prior to the introduction of the Talmud, had given up all communication with their countrymen. Thus, for instance, numerous Jews are said to be resident in China, who know nothing of the Talmud.

A portion of the Jews in Armenia and the Caucasus learnt the existence of the Talmud at a very late date, and received it from their co-religionists in Constantinople, with considerable labour and difficulty. In the third volume of my Travels in the East I have given a detailed account of this circumstance. A violent schism commenced among the Caucasian Jews touching the introduction of the Talmud; those who remained faithful to their creed were compelled to emigrate, and went to the Crimea. Here they found many partisans. According to historical documents in the possession of Firkowitch, the presence of Jews in Dshuffuth Kalèh can be referred to 640 B.C. According to the same savan, there are still Jews living in the Caucasus who do not recognise the Talmud, but their number is very small. In addition, there are a few Karaim in several western and southern governments of Russia.

These facts show that the Karaim must not be regarded as a Jewish sect, which has deserted the mother church. On the contrary, they are the Jews who have held fast to the true faith, while the Talmudists have materially departed from it. The present reform party among the German Jews is striving to revert to primitive Judaism, and consequently approximates closely to the Karaim.

The Karaim are far more tolerant than the Talmudists as regards heretics. This circumstance is the principal cause why fewer obstacles were opposed to their residence among Mohammedans and Christians. As far as is known, the Karaim have never been subject to religious persecution. They are also far more industrious, and, consequently, more prosperous than the Talmudists. Their reputation for honesty and good faith is generally spread through the East. From this cause artisans in Sebastopol state on their signboards that they belong to the Karaim.

There are various opinions as to the origin of the term Karaim. The most probable is the one stating that the Jews who were removed to Armenia from Assyria and Babylonia received the name of Karaim. According to others, the term was originally applied to the followers of the Rabbi Aman, who opposed the Talmudists in Syria, and is said to have founded a separate sect.

The number of Jews in the Caucasus was probably larger than it is at present in the first century after Christ. They had undoubtedly a considerable effect in causing the Chasars to accept the Jewish religion. It is, at any rate, a peculiar circumstance that a whole nation assumed a religion whose partisans did not exercise the slightest influence, and were already treated with more or less of contempt. It is also equally inexplicable what became of the Jewish Chasars after their expulsion. As the capital of their rulers was in the Crimea, it further is not improbable that a quantity of the Caucasian Jews were induced to settle among their new co-religionists in the Crimea. The oldest Karaim document in Dshuffuth Kalèh dates, in fact, from the most brilliant period of the Jewish Chasars in the Crimea, namely, from the seventh century. There may be some truth, therefore, in the statement that the Crimean Karaim originally came from the Caucasus, save that the date of the emigration appears to be very much post-dated. Our amiable host, Rabbi Salomon Beim, also quite agreed in my views, and stated that there was a tradition among his people that their ancestors had originally come from Derbend.

We visited the lately-built synagogue. It is, externally, very unpretending; but internally it possesses very valuable vessels, which are made of the purest silver. I was more interested in a parchment roll in which the Old Testament was written, in a fair hand, in Hebrew. I am sorry to say I saw none of the numerous other MSS. which Baron von Haxthausen was shown, and which he deemed so valuable for the improvement of the Biblical text, and historical purposes.

It is probable that, during the first years of the Tatar dynasty in the Crimea, the khans resided in the fortress of Dshuffuth Kalèh. Several Tatar graves appear to indicate this. Among others, our kind rabbi showed us a small but very elegant mausoleum, consisting only of a dome. Here it is said that the lovely daughter of a Tatar khan, whose name was Tochmatysh, lies buried. Who could this Tochmatysh

have been? Was he, perchance, the unfortunate lord of Khipt-shakh, who lost crown and life in a battle with Timur? Salomon Beim was unable to tell me, or the history of the husband of the khan's fair daughter, the Genoese Jefrosin.

At a late hour in the evening we commenced our return. The kind priest led us to the cemetery. It lies quite at the end of the ravine, which is here called the valley of Josaphat. The Jewish cemeteries in Constantinople, and all through Asia, had produced a very painful effect; but it was quite different here. I saw, it is true, the dazzling white limestone once more; but the graves, with their golden inscriptions, were arranged side by side with the greatest regularity; and oaks, elms, and white beech beshadowed the sacred spot. The staring white was immensely relieved by the refreshing verdure of the trees: but all the graves were precisely of the same shape.

The sun had set when we again found ourselves in the vicinity of the Monastery of the Ascension, but, fortunately, the moon was nearly at the full, and lighted our path. Once again we came to the gipsy village, saw the gleaming stoves, and heard the loud sound of the uplifted hammer—for all gipsies, it is well known, are blacksmiths from their birth. The upright gravestones of the Tatar cemetery, with a turban at their top, cast long shadows, which, like spirits, seemed silently to follow our footsteps. The streets of the Tatar city were silent and deserted. The loud noise of day had disappeared. In the coffee-houses alone, a pale light was burning; with that exception, all was dark, for the houses have their backs turned toward the street, or were situated at the furthest extremity of a court-yard. We at last reached the post-house which lies without the ravine, in an open field, and from which we had set out in the morning, and determined on taking advantage of the moonlight, and continuing our journey at once.

SEBASTOPOL.

CHAPTER V.

SEBASTOPOL.

The promontory—Nature of the soil—Chersonesus—The Goths—The word Sebastopol—The haven—Nicholas bastion—Docks—Quay—Library—Church—Kosarsky—Çatherine II.—Boulevard—Black Sea fleet—Tchernoretshka—Inkermann—Aqueduct—Crypts—Ravine of Ushakoff—An invalid.

We were soon again seated in our small post-cart, and were dragged along at a rapid rate by our *troika*. At about half-way on the road, or 11½ versts, we entered the pretty trough-shaped valley of the Belbek, which appears to be one huge

orchard and fruit-garden. The Tatars are said to produce the best apples here. The village situated in it, and extending for a long distance, is called Duvan-köi, or the village of Duvan, and has a remarkably pleasant aspect, as each house is situated in the centre of an orchard. At the post-station we stopped, had our luggage taken out, and decided on staying here for the night and go on to Sebastopol, which was only ten miles distant, in the morning. By daybreak, we were again seated in the cart. Within an hour we had reached the haven of Sebastopol, and crossed in a boat to the town, which was on the opposite side. It was again a German inn in which we met with a comfortable reception. We allowed ourselves scarce sufficient time to swallow a glass of coffee—for in Russia, as in South Germany, tea and coffee are generally served in glasses—ere we walked out into the town. Our attentive host, who is generally known in the town by his Christian name of Johann (or, as the Russians call it, Jogann, as their alphabet is ignorant of the aspiration), had given us the requisite information as to the spot whence we should enjoy the best view.

The ground on which Sebastopol is built is, in every respect, so interesting, that it deserves a more detailed description. The Crimean coast-range, at its western extremity, like the Caucasus, terminates in a narrow tongue of land. In this way a promontory has been formed, running from east to west, and about three (German) miles in length. The breadth may be about one and three-quarters, and the entire circumference nearly nine, miles. It forms a plateau, intersected by numerous ravines, which extend for some distance eastward, and is there separated from the mainland by a gorge, into whose upper end a stream flows, while the lower very deep part is filled by the sea. In this way a small gulf has been formed, which is one of the best havens in the world, and for its excellent qualities has been selected by the Russian government as the station of the Euxine fleet. We must also add, that this neck of land has four inlets on its northern side, which are also very deep, and filled from the great bay.

According to Dubois de Montpereux, these cavities are not produced by the action of water, but have a volcanic origin. Through eruptions, the very new stone, which, according to him, belongs to the limestone of the steppes, has been repeatedly changed. Petrifactions, however, are very rarely found, and the few that have turned up are so altered,

that the nature of none of them can be decided, at least in the Bay of Sebastopol. But the further we go eastwards, or in the direction where the volcanic influences were weaker, the more shells are found; and we soon ascertain the highly interesting fact, that the shells at the outset belong to the sea, but soon after to fresh waters, but that both are mingled together. The stone, besides, towards the south, grows older; for while in the north it belongs to the latest tertiary era, the neck of land in the south is bounded by a Jura-formation.

The plateau is very infertile, and there is a great want of water upon it. The surface resembles the real pampas, and is only covered in early spring and autumn with a slight display of vegetation. During my stay here, I only saw a few centauries, with small blossoms (*Centaurea diffusa*, Lam., and *C. alba*, L.); serrated horehound (*Marrubium peregrinum*, L.); wormwood (*Artemisia pontica*, L., and *Maritima*, L., *β. taurica*, Bieb.); dichotomous saxifrage (*Seseli dichotomum*, Pall., and *S. tortuosum*, L.); and white upright goosefoot (*Chenopodium urbicum*, L., *album Koch*, *atriplex roseum*, L. and C.). A few oaks grew at the spot where the promontory is connected with the mainland.

It is probable that, even as early as the sixth century B.C., traders belonging to the Pontic Heraclea settled on the north side of the bay, and gave the new colony the name of their father-city. But the parched, infertile soil of the peninsula did not at all remind them of the green and well-cultivated neighbourhood of their home, and induced the Greeks eventually to call it Cherronesus, or Chersonesus—that is, the infertile island. To distinguish it from other peninsulas—for Chersonesus also signifies, in the Greek, a narrow strip of land jutting into the sea—it received the title of the Heracleontic Chersonese. In the course of time the town, which assumed the name of Cherson, acquired greater importance, as its inhabitants were enabled to acquire the entire trade with the northern and western coasts of the Pontus Euxinus, and consequently became prosperous and powerful. Jealous of its prosperity, the Bosphoran kings on the other side of the Crimea tried in vain to humiliate it; on the contrary, they were often defeated. At the period of the Migration of the nations, when Pantikapæon sunk, and all the nations to the north of the Black Sea were erased from the pages of history, Cherson held its ground against every storm, though it lost much of its former importance. When the Goths occupied

the Crimea, they also appear to have taken possession of Cherson, for Procopius calls it, distinctly, a Gothic city.

The history of the Goths in the Crimea, though it must be necessarily highly valuable and interesting, has never yet been thoroughly investigated. We must, therefore, owe especial thanks to Professor Massman, who has rendered most especial services to German archæology, for employing the period of his abode in the Crimea in studies on this point. In a special lecture, which he delivered before the Geographical Society at Berlin, and which was afterwards printed, he has drawn the proper attention to the value of this subject. In the first period of the great migration, the Goths retired into the savage and inaccessible coast-range, and maintained their possession of it, at least up to the sixteenth century. When the Chasars became masters of the Crimea, it received the name of Chasaria; but the southern coast, and especially the western portion, with the neck of land just described, were still called Gothia. The name "Chasaria" disappeared from history, while that of "Gothia" remained. In a treaty made between the leader of the Golden Horde and the Genoese of Kaffa, in the year 1380, Gothia was given up to the latter.

Consequently, Goths must still have existed in the Crimea at this period. The well-known and frequently-discussed narrative of the Dutchman, Rubruquis, who heard Gothic spoken here in 1233, is certainly no fable, but a fact. Eventually the savage hordes of the Turks fell with the fury of wild beasts on the unhappy Christian inhabitants, and afterwords on the Goths, and cut them down, or at least compelled them to deny their creed, and be converted to Islamism. A contemporary writer describes the heroic defence of the two Dukes of Mangup, a fortress now in ruins, and calls them the last remnants of the Gothic nation and language. According to another author, who, however, lived one hundred years later, these two dukes are said to have been Greeks.

During my rather lengthened stay on the southern coast, I had repeated opportunities to form an acquaintance with its inhabitants. They also are distinguished by the name of Tatars, but differ very materially from those on the northern plains. It is indubitable that they are of a totally different origin, and probably have not a drop of Mongolo-Tataric blood in their veins. In size they generally agree with their co-religionists, but in features and bodily constitution they vary so much, that the circumstance immediately strikes even

the most superficial traveller. I do not know, it is true, what the Goths looked like, and will not absolutely affirm that the Tatars of the mountain are of a Gothic origin. The latter, certainly, bear a close resemblance to the Greeks. Nor is there any doubt but that Greek blood flows in the veins of many of the south-coast Tatars. The men are generally of short stature, like the Greeks, but are remarkably handsome, and have a very noble countenance. Women and girls are frequently seen unveiled.

After this assuredly not uninteresting digression, I will return to my description of the Sebastopol of the present day. The Russians, who do not pronounce the Greek Beta like our B, but as a V, called the town Sevastopolis. There are very few places whose names are truly significant. Among the few, however, is Sebastopol; for the word means "a town that commands reverence," or the "Imperial." We need only notice the forts which guard the entrance of the harbour, the gigantic buildings of the Admiralty, the docks, &c., which the Russian government has been engaged in building for several years, and to which I shall presently revert, and the necessary respect will be immediately entertained. The name of Sebastopolis was formerly given, in the first century after Christ, to Dioskurias, formerly the most valuable emporium on the eastern coast of the Black Sea, by its masters, the Byzantine Emperors. But, strange to say, the town had no sooner obtained this haughty name, than it began to fall into decay.

It is not the same with the present Sebastopolis, which has gained in importance with every lustre. No place in the Black Sea appears destined to play so high a part as Sebastopol. While the title has been transferred from the eastern coast of the Black Sea to the Russian war-port, the ancient name of Cherson has been given to a city situated at the mouth of the Dnieper, from which great expectations were entertained, though it has not yet fulfilled them.

I begin my description of Sebastopol with the harbour. It runs about three miles up the country, and its banks grow gradually flatter. At the entrance it may be about a mile or rather more in width. Northwards the bay is bounded by a steep acclivity; but on the southern side, as I have already stated, four small bays intersect the promontory, which are also surrounded by rather high banks. The two central bays are used as war-harbours. At their upper end they have a

depth of nearly forty feet, or sufficient for vessels of the largest draught. Merchant ships are only allowed to enter the first harbour, near the entrance, which bears the name of Artillery Bay; while the last, the so-called Careening Bay, is not used. Although the sea outside the harbour is of very considerable depth—for at the mouth it is sixty, seventy, or more feet deep—still, to render the entrance safe, the necessary precaution has been adopted of building two lighthouses in such a position, that if a ship wishes to enter the harbour without danger, the one lighthouse must perfectly conceal the other, so that only one can be seen. The entire harbour is so large, that not only can the Russian Black Sea fleet find a secure refuge in it, but all the merchant vessels, even if their present number were doubled, could escape an enemy's pursuit in it.

It may be easily imagined that the Russian government has taken the requisite precautions, not only to protect their own ships, but to prevent an enemy from entering. Four strong forts, two on either side, have been built for this purpose at the mouth of the harbour, and are able to withstand the fiercest bombardment. The two outermost are called Alexander's and Constantine's bastions. At the period of my visit, one of the inner forts, called the Nicholas bastion, just to the east of Artillery Bay, was nearly finished, while the one opposite was building.

We were permitted to make a close inspection of the Nicholas bastion. My heart grew really sad when I saw here nothing but implements of murder. The bastion forms a half-moon, and has three batteries above one another. The entire building was bomb-proof. I was surprised that the soft limestone of Inkermann had been employed for the purpose, as it rapidly wears away, when exposed to the influence of the weather, much sooner than granite and other plutonic stone; and an extraordinarily hard green-stone (diorite) could have been procured in the vicinity. Perhaps, however, a softer stone is best adapted to resist bomb-shells. That granite cannot withstand, for any length of time, our modern missiles, we saw at the capture of Bomarsund.

On the ground floor lay the bombs and grenades; I saw the furnaces, in which the balls are heated red-hot before they are fired. In the other stories were three batteries, each armed with one hundred and ninety-six guns. The larger guns, 64-pounders, were separated from the rest, and stood in small

separate chambers, behind which the space was employed for the *chancellerie* and similar requirements. The larger casemates contained twenty and more guns, and served at the same time as barracks for the soldiers. I have had repeated opportunities of speaking in terms of praise of the great order and cleanliness in the Russian barracks, but here everything appeared to me even cleaner and more tidy than usual. I was told that a fourth battery would be eventually planted on the roof; this is the case with the two more advanced batteries. These are considerably smaller, and only mount three hundred and sixty guns a-piece.

The rather irregular and straggling, but generally pleasing, town lies on the end of the promontory towards the sea, and on one side runs to the sea; while, on the other, it surmounts the heights, and extends to a considerable distance behind the four bays. A little projection, which runs into the war harbour, was levelled, in order to make room for the new dockyard. This is, in truth, a gigantic task, in which several hundred men were engaged uninterruptedly for many years. A retired officer took the contract, and received above a million dollars. I was told, that by the year 1851, the promontory would be entirely removed; and I presume that such is the case. Iron rails were laid down to carry off the earth more easily.

The docks are equally magnificent, which were completed a few years back. Here new ships are built and the old ones repaired. Until that period, it was almost impossible to fit out ships of the line. It is now effected with great ease by means of the docks, which consist of three basins, situated one behind the other. Each basin is so spacious, that two ships of the line can be received into each simultaneously. If a vessel has to undergo repairs, it is taken out of the harbour into the first basin, the water in which is on a level with that of the port, and it is closed with water-tight gates. The ground of the other two basins is dry, as it is higher than the level of the haven. By means of a watercourse, situated rather higher up, of which I shall have occasion to speak presently, so much water is let into the lowest basin, as to bring it on the same level with the second, which is also filling. As the water rises, the vessel naturally follows its movements, and is soon above the surface of the harbour. It is now dragged into the second or middle basin, and a pair of gates again separates the lower basin from the central one.

While the water in the lower basin is again allowed to flow back into the harbour, the central one is again filled with so much water by means of the watercourse, that it is on a level with the uppermost one, and is able to receive the vessel. This is again shut in by gates, and the water is let off. In this way the ship is dry-docked, without receiving the slightest injury, and can be easily repaired. The height of the docks, where the ships are repaired, is forty feet above the level of the harbour. The space is so large, that three line-of-battle ships, two frigates, and other smaller vessels can be under the workmen's hands at once; for there are seven smaller graving docks connected with the larger and first basin, which are filled directly from the watercourse. An idea of the expense of these works may be formed from the fact, that the lock-gates, which were procured from England, alone cost the sum of 270,000 silver rubles.

In the neighbourhood of the docks, an Eling has also been built. By this title, which is derived from the name of the inventor, is meant an apparatus by which smaller vessels can be repaired. The ship is covered over, and lifted by machines out of the water on to the dry land. But in spite of the covering and every precaution, the vessel is more or less injured by the process. The Eling, I was told, would be finished within a year, and has, therefore, been in full work for several years.

The quay also excited my admiration in an equal degree. It was not finished; but what I saw was very handsome. The casework, pillars, &c. were of granite, which was brought, at an immense expense, from the shores of the Bug, while it is covered with green stone from Alupka and other places on the southern coast. I was told that free stone was employed for the foundation. At any rate, it would be some stone capable of more wear and tear than that quarried in the neighbourhood.

The town is rendered a very pleasing object, from the fact that trees are seen before many of the houses, and even arbours, generally formed of vines. In this respect the Catharine-street deserves especial mention, the more so as it is not so immoderately wide as is generally the case in Russia. Towards the harbour the officers and higher employés reside, and near the sea, the married sailors, under officers and subalterns. On a high point in the town stand the turret-shaped buildings of the library, which might be mistaken for

an observatory. Undoubtedly it would not appear so high if any other lofty buildings stood near it. A handsome, broad flight of steps leads to the inner rooms, and is adorned on either side with a sphinx. The interior is elegant, but, at the same time, practical. On the walls, all sorts of ships are depicted in *bas relief*. The model of a ship, in the middle of the reading-room, is very beautiful.

At no great distance from the library stands a new church, which must have been built after the model of the Temple of Theseus at Athens. It is a basilica, surrounded by Doric pillars. It has a great advantage over other Russian churches, from the fact that its interior has a suitable simplicity, and is not overladen, as is usually the case, with poor and frequently bad pictures.

We next went to visit the monument erected to the brave Kosarsky, which is also remarkable for its simplicity. Kosarsky, during the last Turco-Russian war, was surrounded by three of the enemy's men-of-war. When they attempted to board, he declared that he would blow up his own ship and the enemy as well. They then attempted to destroy his brig, the *Mercury*, with their broadsides, but set to work so clumsily, that Kosarsky was enabled to escape, and join the Russian fleet, though, of course, his vessel was greatly injured.

At the end of the Catharine-street towards the harbour, is the small house in which Catharine II. resided during her short stay here. Tatars had entered into a conspiracy to murder the empress. Fortunately, their design was betrayed, and the empress hurriedly escaped from the danger that menaced her. Unfortunately all has not been left in the pleasant little house, which only consists of a ground floor, in the same condition as when the empress inhabited it.

To the south of the town is the Boulevard, which is the most frequented walk of the inhabitants of Sebastopol. From this spot a view is obtained of a part of the town, the entire harbour, the opposite coast, and, in addition, a long way out to sea. More toward the east, and consequently nearer the oak wood already mentioned, hospitals and barracks have been erected. As may be imagined, the number of sailors and soldiers who spend the winter here is very large. The number, I was told, varied, some saying 15,000, others 20,000. On the other side of the harbour, there are also

several barracks for their reception. The number of permanent inhabitants, who spend the entire year in Sebastopol, does not exceed 8000 to 10,000.

In the afternoon, we took advantage of the fine weather to examine the interesting aqueduct which brings water to the docks, as far as its commencement; and, at the same time, to see the celebrated caves of Inkermann, of which we had heard so much. For this purpose we hired a boat, and an old sailor became our guide.

I will take advantage of this opportunity to make a few remarks about the war-fleet of the Black Sea. With few exceptions, all the ships had already returned to port; some of them even had been unrigged. At the time when I was in Sebastopol, the fleet was thus composed:

15 Ships of the Line.
6 Frigates (2 of them building).
5 Corvettes.
11 Brigs.
7 Cutters.
6 Tenders.
2 Yachts.
18 Transport vessels.
14 Steamers.
2 Guard-ships.
1 Bomb-ship (a three-master).

87 vessels.

These form two divisions, each of which consists of three brigades, or nine ships' crews. The latter have not always the same complement, for there are two of them which possess neither a ship of the line nor a frigate, and only consist of a corvette and a few smaller vessels. The ninth squadron, consisting of four brigs, one tender, two small steamers, and fifteen other smaller vessels, forms the flotilla of the Caspian sea.

When we reached the extremity of the harbour, we rowed up the stream that flows into it. The Tatars call it the Great Water Böyuk Usen, as the streams in the neighbourhood are insignificant; the Russians, the Tchernoretshka, or Black River. The latter namely are accustomed, like the Turks and other Eastern nations, to call sluggish waters black, while those that flow rapidly are called white rivers or

streams. Thus, Karassu, or Black Water, is a very common appellation for all slow and turbid waters. In the same manner the Russians term several mountain streams in the Caucasus Belaya Rietshka, that is, White River. The Tchernoretshka, up which we were rowing, fully deserved its name, for it was filled with muddy, marshy water, and was choked up with reeds and various aquatic plants.

The valley continues of nearly the same breadth for nearly a German mile; but it has been gradually so silted with alluvial deposits, that its bottom is now above the surface of the harbour. The scenery is very pleasant, as the ground is covered with the most beautiful verdure, and a few trees, principally the prickly-leaved ash (*Fraxinus oxyphylla*, Bieb.), improve the landscape. The heights, which rise on three sides, appeared to me to be more wooded than is the case on the neck of land.

On the right hand side is a small cauldron-shaped valley; its upper part has been employed as a basin to collect spring water, and especially that which falls in the rainy season, or is obtained from the melting of the snow. The whole apparatus reminded me forcibly of the celebrated aqueducts at Constantinople. The water is conveyed in a channel nine feet in width round the hills, which enclose the reservoir, to the great valley. To avoid a ravine, and gain a fall for the water, an aqueduct has been built, which is supported by eight arches, and is about two hundred feet in length. The heights at the entrance of the valley suddenly rise, and it was found necessary to tunnel through them. This tunnel is one of the finest I ever saw. Eighty sailors worked day and night in gangs, which relieved each other every four hours, and yet they required fifteen months to accomplish the great work. On the 19th (31st) July, 1832, it was commenced, and the 19th (31st) October of the next year saw its termination. Fortunately, the stone, especially at the outset, when it was composed of a greyish-green marl, was not hard, and was easily excavated. The Nummulite limestone, which succeeded to the marl, probably entailed a greater degree of labour.

Within this tunnel, which is twelve feet high and six wide, the water flows in an especial bed four feet deep and nine in width. By this arrangement a span of three feet is left, which is used as a footpath on either side of the canal. We did not begrudge the labour of walking through the entire

tunnel, which we were told was about a hundred and thirty-three saschenes, or about nine hundred feet long, and convincing ourselves in that manner of the excellence of the work.

Close to the opening of the tunnel is an interesting crypt, with several smaller ones. It is said to have formerly belonged to a church, and was much larger at one time. At the end of the last century—so our talkative sailor told us—a part suddenly gave way, and the hill-side fell in. The soft stone—it is the same marl out of which a portion of the tunnel is excavated—is not of such a nature that sculptures or other ornaments would last for any length of time. This may have been the reason why I found no traces. In a few of the cells, which were probably inhabited by monks in earlier ages, sailors have set up their tents and spend the whole of the summer there.

Other rock-excavations, which were visible on the opposite side of the ravine, though also towards its entrance, appeared to me much larger than these crypts. I felt no inclination—especially as the sun was sinking and warned us to return—to walk across the valley, and examine those cavities, as I had been so little satisfied by the view of those I was now at. They are called after an old castle which stands on the summit, the Caves of Inkermann, and have been already described by several travellers.

Our guide at last started homewards. We followed the really magnificent watercourse, as it wound round the hills and crossed the valleys. A second aqueduct has been built over the largest, which is called the Valley of Ushakoff, from the name of its owner, and is of considerable length and breadth. This is very much larger than the other, and is supported on sixteen arches. The length is about three hundred paces. The soft limestone has been employed for the purpose.

The ravine was very pleasantly situated, and had been converted into a park. In the centre I saw a nice-looking country-house. Among the trees, which human hands had planted here, I saw, besides the prickly-leaved ash, the turpentine pistachia, which bears a striking resemblance to it. I was less pleased with the large pavilion, as it was not built in the purely Chinese style, and the bright contrasted colours with which it had been painted caused an unpleasant effect. A tall flagstaff, which rose from the centre of the pavilion, was a strange, but by no means disagreeable, object.

Night came on. Our good-tempered waterman told us anecdotes of his adventurous life. For forty years he had served on board the fleet. At last, in consequence of his advanced age, he was dismissed from active service, and received a pension, which, however, did not suffice for his support. He had found temporary employment with a boatman, who, for 5000 rubles, had purchased the right to supply the inhabitants with boats, and keep up the communication with the opposite coast. For this purpose he had thirty-two boats, which, though very simply built, seemed to be very substantial. On an average, each cost from 110 to 120 rubles.

Before I continue the description of my travels, it may possibly be worth while to make a few remarks about the possibility of a conquest and eventual occupation of Sebastopol by the Western Powers. In my description of Kaffa, I mentioned that as the spot, which, through its site and the facility of defence, merits all the attention of the allies, and, at any rate, possesses a greater value than Sebastopol. The Cherson of the ancients was certainly at one time a place of importance, but never attained such a brilliancy as Kaffa, the present Theodosiopol. It cannot be denied that Sebastopol possesses an immense value for the Russians, for, as long as a powerful dynasty capable of defending itself is not established at Constantinople, in the event of the inevitable and doubtlessly speedy ruin of the Turkish empire, Russia would have a considerable advantage over the other powers, and even over Austria. It is openly stated by the Russian party that the Tzars regard themselves as the legitimate successors to the Eastern empire, and, not without good cause, received the Byzantine double-headed eagle into their armorial bearings. It was not through the treaty of Hunkiar Skelessi, but much earlier, through the peace of Kutschuk Kainardji, that the Emperor of Russia obtained a species of protectorate over all the members of the Eastern church, and thus acquired a firmer footing in the Turkish empire than all the provinces given up to him in Europe and Asia could procure him. Jealously hoarding this privilege, Russia attempted to frustrate the claims of the Latins with regard to the Holy Places, and as she did not succeed as she anticipated, she sought to compensate herself by demanding of the Sultan that the right, only hitherto claimed, of watching the interests of the Eastern church should be converted into an actual protectorate. The Turkish government recognised the dangers which threatened

its weak independence; and was aware that the Christian tribes, especially the Greeks and Armenians, would never forget the insults and oppression to which they had been exposed for centuries, and would seize the first opportunity to revenge themselves on their tyrants. The Sultan resisted, and has proved that there must be some vitality in his empire by the resistance he has displayed.

But, for all that, the Western Powers do not conceal from themselves the fact that the hour is no longer far distant when the "sick man"—to employ a phrase generally in use—will die, in spite of all his attempts to maintain his strength. Before any of the Western Powers, and even Austria, could hurry to the rescue, Russia, by the assistance of Sebastopol, could throw large bodies of troops into Constantinople, which, once in the possession of the capital, could not be so easily expelled, even if the sympathies of the Greeks were not on their side. We have already seen how difficult it is, and what a length of time it requires, to carry large bodies of men from England and France to the East. And we must, indeed, admire the rapidity with which the French, more especially, took their troops to Turkey. It must be remembered that Russia has two *depôts* in the vicinity, from which reinforcements can be quickly brought up. Vosnesenzk, the large military colony in Russia, is situated on the Bug—that is, on a navigable river, and at no great distance from its mouth. In the Caucasus, from 160,000 to 180,000 have been hitherto stationed, to keep down the mountaineers; 60,000 to 80,000 men, as we have already seen, could be easily placed on board ship at Poti or Suchum Kaleh, without exposing the Cis or Trans-Caucasian provinces, and be employed for simultaneous operations in Armenia and Asia Minor.

It is seen, therefore, that the Western Powers and Austria are considerably in the worst position, and that they must use every effort to be prepared for certain eventualities. The destruction of Sebastopol, and the annihilation of the Russian fleet in the Black Sea, would certainly remove the apprehension for a time. I believe, too, that this is the sole object of the Western Powers, and that they do not intend any permanent occupation of the Crimea or Sebastopol. It is now generally doubted whether the latter place can be taken by a naval attack. It is, however, very possible from the land side. When I was in Sebastopol, the defences of the harbour were being built, but the town was quite open on the land side,

and not at all prepared for any attack in reverse. Whether this was attended to afterwards, I do not know; but I doubt much whether anything has been done of particular importance.

Sebastopol is certainly very favourably situated for defensive operations, as it lies to the north of a neck of land, which can be very easily cut off on the landward side, as it forms a species of plateau, which is only connected to the south-east with the actual coast-range. This plateau is about twelve miles long, and not quite nine miles in breadth. In the period of the Chersonese republic, a wall was built on the eastern declivity of the plateau against the inroads of the Scyths and the Bosphorean kings, which, though adapted for the simple appliances of the warfare of that day, would have to be built in a very different fashion now. This wall, of which very considerable remains could be seen at the commencement of the present century, commenced in the vicinity of Inkermann and the above-mentioned reservoir, and ran in a due southern direction as far as Balaklava.

In consequence of the general elevation of the promontory, and the want of any suitable landing-place, no troops can be disembarked upon it. The English and French troops must, consequently, land either at the town of Balaklava or to the north of Sebastopol, at the mouth of the Belbek, or else at Eupatoria. The first-mentioned supposition possesses extraordinary difficulties, as, although there is a very secure harbour, the entrance to it could be very easily defended. In addition, the valley of Balaklava is not large enough for the operations of any considerable body of men. If the troops land to the north, they would have the additional advantage of taking the northern forts in reverse, and once in possession of them, the remainder of the siege would present no difficulties.

I have already said that the allies would have to be satisfied with destroying the Black Sea fleet and the fortifications of Sebastopol. Any permanent occupation would cost the Western Powers immense sacrifices, and eventually lead to no result. *Sebastopol can never be converted into a Gibraltar.* The most difficult thing about a permanent occupation would be the support of so large a body of troops as appears requisite to hold so distant a fortress. If the allies attempted to hold the whole of the Crimea, the difficulties would only be increased, as the proximity of a powerful enemy would demand the greatest defensive measures, especially as

all his energies would be concentrated on the re-acquisition of the Crimea. The Crimea will never be capable of supporting large bodies of troops in addition to its population, for water is generally wanting, except in a few valleys: without this, no fertility or agriculture is possible. The belief in the immense resources of the Crimea, to which all Russia yields, dates from the time of the great Catharine, whom Prince Potyomkin (Potemkin) tried to deceive by ephemeral colonies. The recent campaigns in Turkey have sufficiently taught us how difficult it is to support large masses of troops in non-civilized countries.

Time will teach us what we have to expect. The Western Powers have recognised the difficulties of their position, and assuredly did not commence the assault till they felt certain of success. Though the operations in the Baltic were so far below expectation, those in the Black Sea will, doubtless, satisfy our most ardent aspirations.

CHAPTER VI.

BALAKLAVA AND THE COAST-RANGE.

The ancient Cherson—The Læstrigones of Homer—Parthenion—An excursion by moonlight—Baidar—The new road—A mountain pass—Magnificent view—Vegetation—Kirkinneiss—High prices.

We employed the following day in examining the ruins of the ancient Cherson, or Khorsun, which are situated to the south-west of Sebastopol. Dubois de Montpereux and Kohl have given such detailed accounts of the present condition of this once so celebrated emporium, that it would be superfluous to give any description of these ruins here. It would cause the greater embarrassment, as my journal, which I always kept with the greatest precision and at the exact time, does not at all agree with their statements. The two travellers saw a great deal more than it was my fortune to perceive; I only saw a confused mass of ruins, a few fragments of masonry, and was not able to trace the ruins of a temple, or those of a church.

I was told, however, that a few years prior to my visit the ruins had been in better preservation, and that within three years every trace of them would probably be lost. In the first place, the foundation of Nikolayeff on the Bug has materially decreased the former widely-extending remains of Cherson; for the splendid blocks of greenstone were carried off for building purposes. Since Sebastopol has been growing into a city, all the stones of any value in the ruins have been entirely removed. This Vandalism—I cannot use a milder term—is not so much the performance of the government, for the emperor has ordered the preservation of all ruins possessing antiquarian value, as of private persons. I was shown houses in Sebastopol which were stated to be entirely built from the ruins of Cherson.

On the afternoon of September 24th we quitted Sebastopol, *en route* for the celebrated southern coast. My original design of thoroughly examining the neck of land and its coasts, I was compelled to give up, in order to find time to

devote to the far more interesting southern coast, and catch the steamer for Odessa. We therefore quickly drove over the classic soil of the peninsula. Towards its southern extremity, there is situated a Greek town, Balaklava by name, on an inlet which runs deep into the land; the road thither was only about twelve versts.

I had certainly been told a good deal about the peculiar position of this little town; but when we descended from the plateau, and the hollow, with its dark blue waters, lay expanded before us, it surpassed all we had ever seen, all we had ever heard. The basin is about a mile in diameter, and is surrounded, with the exception of a narrow gorge, by very precipitous and only partially wood-covered rocks, which have an elevation of some hundred feet. The arm of the sea occupies nearly the whole of the hollow, and, save on the side opposite to us, where the water comes up close to the rocks, is surrounded by a green velvety lawn. Here lies, too, the little town of Balaklava, composed of a few private houses and a number of shops. The agricultural inhabitants have settled on the slope, which we descended, in order to be nearer the produce of their industry. The Tatar name of the place is Kadiköi, meaning the judge's village.

The inhabitants are Greeks, who quitted Turkey in the reign of the great Catherine, and, having obtained special privileges, settled on the same spot where, more than 2000 years before, colonists from Asia Minor, Milesians, established themselves, and founded the colony of Symbolon (Cembalo among the Italians of the middle ages). This colony, however, never acquired any very great importance, and was generally dependent on the powerful republic of Cherson. When the Genoese had established themselves firmly on the southern coast, Cembalo soon yielded to their authority. This town also decayed when its lords were overthrown. At a later date, Tatars resided here, until they were again compelled to give way to Greeks at the close of the last century.

Eight thousand persons quitted the Greek archipelago at that time, and settled here. The number appears to me now not so great, but I do not know whether it has been diminished by sickness, or some of them eventually selected another place of abode. The Greeks still possess their own court of judicature, and an independent magistracy, whose president is only responsible to the Russian authorities, and hands them in an annual report; they are free from the conscription law

but are obliged to maintain a battalion of five hundred men, who perform coast-guard duties along the entire southern coast.

While walking along by the side of the dark waters, I noticed medusæ, a sure indication that this was no lake, but a gulf connected with the sea by some narrow outlet. I was curious to form a closer acquaintance with the celebrated fish, kephal and petuch, which are so praised here, but which Kohl found so disagreeable eating. I could easily conjecture that the kephal was the common mullet (*Mugil Cephalus*, L.), for the French give it the same name; the petuch is the red mullet (*Mullus Barbatus*), which among the ancient Greeks bore the name of trigla.

The romantic acclivities, which are not formed of nummulite limestone, but of a greyish blue or light red Jura rock, have their beauty augmented by the numerous ruins visible upon them. Here certainly stood the old castle from which the entrance to the straits was commanded. Traces are still found of an immense outer wall, and there are two towers in a respectable state of preservation, one of which is built right above the narrow entrance. A harbour more protected against storms and sudden attack, would be difficult to find. It is, however, too small ever to acquire any importance.

Dubois de Montpereux fancies he found here the spot which Homer describes in the tenth book of his "Odyssey." In truth, if we visit the harbour of Balaklava with this book in our hand, we would be induced to imagine that the bard had actually visited the place. It is the passage describing Ulysses' first approach to the country of the Læstrigones, and which Pope thus translates:

> "Within a long recess a bay there lies,
> Edged round with cliffs, high pointing to the skies;
> The jutting shores that swell on either side,
> Contract its mouth, and break the rushing tide.
> Our eager sailors seize the fair retreat,
> And bound within the port their crowded fleet;
> For here, retired, the sinking billows sleep,
> And smiling calmness silvered o'er the deep.
> I only in the bay refused to moor,
> And fixed, without, my hawsers to the shore."

Those gentlemen who make it a point to reject every theory that does not coincide with their own, and firmly insist that the peregrinations of Ulysses took place in the Mediterranean, should remember that very probably the whole Trojan war,

at least in the way it is sung, is one of those myths in which the præ-historic age of the Greeks is so rich. At any rate it is a highly interesting circumstance to find a place which so entirely agrees with the poet's description of localities. We need not be accused of attempting to prove too much by our statement.

Dubois, in order to confirm his views, appeals to history, which states that nations lived here in the earliest ages who murdered strangers; while Father Homer describes the Læstrigones as cannibals. The bard of Iphigenia, who belongs to a period when the Greeks enjoyed a high degree of cultivation, states that strangers, who were driven by storms to the Crimean peninsula, were sacrificed to Diana. Just as Homer's description applies to Balaklava, in the same way the narrative of Orestes and Pylades' abode on the Tauric peninsula also indicates the same neighbourhood. Is not the mere removal of Iphigenia from Aulis to Tauris a significant hint that the Greeks of the Homeric age had a very accurate acquaintance with the coasts of the Black Sea? The transference of the "Odyssey" from the Greek archipelago to the Pontus Euxinus is, in truth, not quite so absurd as some people think it.

One of the promontories which juts out from the Heracleontic Chersonese into the sea, was indubitably the Virgin's promontory, Parthenion. There, too, according to the Greeks, stook the Temple of Diana, in which Thaos was high priest, and sacrificed all strangers to the Divinity. According to the opinion of Dubois and others, at the very spot where Diana once presided, a monastery now stands, dedicated to St. George, whose monastic denizens spend a portion of the summer on board the Russian fleet.

The inspection of this romantic and interesting neighbourhood occupied us nearly the whole afternoon. We waited for the sunset, and then drove, by the magnificent moonlight, to the next station, Baidar, a distance of two-and-twenty versts. Although we intended to travel along the coast, and a ridge of rocks alone separated us from its romantic scenery, we were still compelled to turn once again to the northern side of the mountain, and, for this purpose, surmounted its ridge. Precipitous rocks of the strangest forms seemed to rise out of the waves, and render any path along the coast impossible.

We preferred to scale the steep mountain on foot, that we might be the less impeded in observing the magnificent view

in our rear. The higher the moon rose, the more the dark shadows in the ravine disappeared. The ruins bathed in light and the romantic rocks at first formed a strange contrast to the basin, which still lay in the deepest shade. We seated ourselves on a stone, and waited patiently until the moon rose so high that it illumined the surface of the water, and its image, dancing on the waves, was reflected in them. We found it a hard task to follow the advice of our postilion, and once more enter the carriage.

In it we soon reached the top of the mountain, and a valley of a very different description lay stretched out beneath us. This ravine, which has obtained its name from the large valley of Baidar situated in it, is of very considerable circuit, and only inhabited by Tatars. A stream here falls into the Beyuk Uben, which flows further to the west, and, as we have already seen, forms the port of Sebastopol. Only Tatars live in this very populous valley, who enjoy a degree of prosperity not to be found among their co-religionists in the plains. The valley of Baidar is not deep, and is rather trough-shaped. The heights which enclose it display no romantic scenery, but are more or less tame. The most beautiful trees and shrubs grow along them, and principally oaks, which, however, do not grow to any very great height. The bottom of the valley is also covered with vegetation; and the Tatar houses stand in the centre of pleasant gardens. The fruit grown here is inferior to that between Sebastopol and Baktchi-Sarai. I did not find those extensive meadows, which other travellers, and especially Kohl, have described. I really felt quite light-hearted at having left the melancholy pampas behind me.

In Baidar we spent the night of the 25th September, awaiting the rising of the sun to continue our journey. A few years back, travelling from this place to the coast was accompanied by all sorts of obstacles, and even dangers; any one who felt giddy, preferred going round by Simpheropol to the south coast. The journey at that period could only be accomplished on foot or horseback. In the second part of the expedition, the traveller was forced to trust entirely to his horse, or preferred to dismount and display his agility. Prince Woronzoff had sent repeated reports to St. Petersburg, in order to obtain the funds for making a road hence to the coast, and along the latter to Theodosia, but had always been refused. All at once, a sum of money was found at Simpheropol, which had been hitherto quite forgotten. The prince

was informed of it, and fancied he could put it to no better purpose than in making this road along the coast, thirty (German) miles in length.

A young officer of engineers, Major Frömbder, was commissioned to execute it. In a few years, thus one of those pious wishes, which are also formed in the Crimea, was fulfilled. The road is finished, and does the officer all honour. Unfortunately, it is rather narrow, and not paved; but you must cut your coat according to the cloth—that is, more could not be done than the money allowed. The road satisfies any moderate-minded man; and besides, it answers its purpose. On the southern coast, no heavy wagons travel, and not so many vehicles are used there as among ourselves, so that the road can be always kept in a tolerable condition by a little care.

We soon reached the crest of the mountain, and found ourselves at its highest point. We suddenly surveyed the magnificent view that lay outstretched beneath us. I felt as if my blood was at a standstill, and could not course through my veins with its usual velocity, so great and surprising was the effect produced upon me. We were standing on the summit of the coast-range, at a height of 3000 feet, and looked down upon the boundless expanse of azure sea; and I felt irresistibly attracted to my home, above which the same blue sky probably smiled at the same moment. A couple of vessels were sailing in the distance, like swans, which they resembled in size, upon the calm waters. Before me, however, the rocks fell away precipitously, and rested upon a sloping bank overgrown with shrubs. Around me, pinnacles of rock rose in the air; upon some of them grew dwarf oaks, or that variety of pine which is called the Tauric, from its fatherland. Our eyes wandered from one object to another, and sought for some point of repose, from which they might acquire renewed strength; but all was beautiful and magnificent, although so wonderfully varying. Until now, all that I saw around me had lain in deep shadow; but suddenly the sun rose above the mountains, and in a second its golden beams were diffused over the dark blue sea, and seemed to start into life on the gently heaving surface. At the same time, the verdure along the sea-shore grew gradually brighter.

We slowly descended the secure mountain path in a zig-zag direction, and ordered the postilion to drive as quickly as possible to the station, in order not to have the effect dispelled.

On after reflection, I found a great resemblance to the southern coast of the Black Sea, especially that running in an easterly direction from Trebizond through the notorious Lasistan. There, however, the vegetation was more luxuriant, and the mountains, thrice the height of these, far more majestic. Here, on the other hand, the romantic rocks occupied the foreground; the foliage was only dense at the base of the wall of rock, and was otherwise thinly scattered. For this very reason, the Crimean coast-range is more effective, even more savage, than the Pontic. The cultivation which has taken root here during the last few years, somewhat tames the wild character of the scenery, but cannot totally destroy it. But this circumstance, again, imparts to the mountains a peculiar charm.

At length we reached the foot of the wall of rock. The new road runs in an easterly direction along the slope to which we have already referred. I found the vegetation below even more scanty than it had appeared to me from above. The shrubs looked like brambles, which had abundant space to shoot out their branches. The principal trees growing here were oaks, the leafy, pubescent, and peduncular oak (*Quercus pubescens*, Willd., and *pedunculata*, Willd.); the cornelian cherry dogwood (*Cornus mascula*, L.); our hornbeam, and the Eastern (*Carpinus betulus*, L., and *Orientalis*, Lam.); the blackthorn (*Prunus insititia*, L.); the prickly thorn (*Prunus spinosa*, L.); several varieties of white thorn (*Cratægus melanocarpa*, Bieb., *Oxyacantha*, L., and *monogyna*, Jacq.); the pyracanthus (*Cratægus pyracantha*, Pers.); the juniper with bright-red berries (*Juniperus rubescens*, Link.), and a few others. I saw very few annual and hardy plants; but the season had grown rather late for them. What I saw, however, was sufficient to tell me that grasses, labiate flowers, orchides, and thistles (*Cynarocephalæ*) were prevalent. In flower, I still found horsemint (*Mentha Sylvestris*, L.), summer savory (*Saturiea Hortensis*, L.), and rue.

About mid-day we reached the Tatar village, Kirkinneiss, where our horses had been enjoying a long rest. But we had grown tired as well, and treated ourselves to an hour of laziness. Travellers are principally indebted to Prince Woronzoff for being able to travel comfortably along the southern coast, as well as for many other benefits. He has had excellent post-houses built, and is particularly attentive that good conveyances and horses are ready at a minute's

notice. One thing requires a change, which would be of advantage to the poorer class of travellers, especially to *savans*, who never have a full purse: the prices should be lowered, not merely in the list of charges, but in reality. A traveller could lodge at the best Continental hotel for the money paid here for board and lodging. Each of us was obliged to pay half a silver ruble (about 1*s.* 4*d.*) for a couple of buttered eggs. The same sum was demanded in Baidar, merely for leave to pass the night on a wooden bench. A cup, or rather glass, of tea costs always from twenty-five to thirty copecks, and in some cases forty (8*d.* to 10*d.*).

Kirkinneiss is romantically situated at no great distance from the foot of the precipice, and in the centre of delightful orchards. I was highly delighted with the magnificent walnut-trees, which here take the place of the planes in the East. The houses are very different from those in Baktchi-Sarai, and, as is the case in Georgia, are built against the side of the hill. They have flat roofs, on which the family passes the evening, generally amusing themselves, or quietly listening to a story. The walls are also built of stones laid on the top of one another, and not cemented by mortar.

CHAPTER VII.

ALUPKA—MAHARATCH—NIKITA.

Simeiss—Alupka—Prince Woronzoff—A sterile country—The gardener, Kehlbach—The pleasure grounds—A Plutonic eruption—Strange plants—Want of grassplots—The Château—The furious postilion—Lovely view—Oreanda—Gaspra—Livadia—Yalta—Maharatch—Prince Galitzin—The princess, and her love of art—Massandra—Nikita—Herr von Hartwitz—Cultivation of fruit-trees and vines—The Crimean wine—Foreign trees—The cork tree—Major Frömbder—A storm.

After swallowing a frugal breakfast at Kirkinneiss, we recommenced our journey, and soon reached Alupka, the celebrated château of Prince Woronzoff. The road runs along the summit of the acclivity, while the country-houses and villas either lie close to the sea-shore, or are in the centre of a plantation on some promontory. I now regret that I did not go on foot, and select the road along the sea coast. Our plan was to go direct to Yalta, the chief place of the coast, and thence make excursions in various directions. We did so, but though we saw many other beautiful spots, we did not return here again. Above all, I should have liked to visit Simeiss, the château of one of the most talented women in Russia—Natalie Feodorovna Naritshkin. In 1833, I had an opportunity to form the acquaintance of this lady at Odessa; and she would now have assuredly called my attention to much that escaped me, as she has studied the flora of the Crimea with great care, and keeps up a constant correspondence with Herr von Steven. I was, therefore, obliged to satisfy myself with the thought that I had seen it at a distance. Besides Simeiss, we saw another château on the sea shore, called Mtschetka, and which is equally picturesque.

I had heard so much of Alupka, Prince Woronzoff's Alhambra in the Crimea, that I was delighted at the opportunity of settling the contradictory accounts of various travellers. One writes full of delight at all he has seen, whilst another feels himself greatly deceived in his expectations. What appears to one magnificent and noble, is to another

clumsy and barbarous. One only finds grey stone, another the most lovely scenery. When, however, a person has to form an opinion, it is, in the first place, absolutely necessary that he should not regard his own taste as the quintessence of everything æsthetical, but must take into consideration all the circumstances, and place himself, as far as possible, in the position of the person whose work he proposes to criticize. Even though there are not a hundred places on the southern coast superior to Alupka, as I have heard stated, still it cannot be denied that Oreanda and Livadia, of which I shall presently give a detailed account, possess a more beautiful and far more pleasing situation. But if a man is a lover of the romantic and wonderful, as is certainly the case with Prince Worouzoff, there is, most assuredly, no other place in the entire peninsula which would so fully come up to his expectations. What art had effected pleased me equally, although, for my part, I must allow that I should like much altered. But even in the most successful designs, much may be suggested, when too late, which cannot afterwards be altered: and so is certainly the case at Alupka.

The nearer I drew to the prince's estates, the more precipitous the scenery became, and a mass of boulders completely prevented any satisfactory vegetation. The pleasant verdure and the wood-covered rocks, which pleased me so much at Kirkinneiss and further on, gradually disappeared in the vicinity of Alupka. All appeared to be dead: on all sides barren rocks rose, or masses of stone covered the ground, on which no green herbs or grasses grew. Even the Parmeliæ and Lecideæ, which so rapidly grow over our rocks, and give the first signal of the dissolution of the surface, were only rarely visible. Here and there was a group of blackthorns, oaks, and beeches, or juniper was growing in the clefts and on the slopes. But inanimate nature fully made up for this. The numerous boulders, and masses of rock piled on each other, and the walls of slate which rose horizontally before me, told me that the effect of the subterraneous forces must have been greater here than at any other part of the coast. Not a bush, not a tree, had found sufficient space to grow on the jura of which the precipice was composed; but at the very summit, 2500 feet above Alupka, the stone has been rent asunder, and has been converted into a mass of pinnacles and jagged points, between which a few trees, more especially the Tauric fir, find a scanty means of existence.

At the very spot where Vulcan's forge was most active in a pre-Adamite period, where nature appeared in her utmost savageness, Prince Woronzoff proposed to carry out his magnificent designs. He was pleased with the piled-up masses of rock, he found delight in the terrific precipices, he was not terrified at the scanty vegetation, for he had here a larger field in which to display his talents. What would have been an obstacle to others, only aroused his energies to the completion of the task. By the assistance of his clever gardener, Kehlbach, he has breathed new life into the dead. For five-and-twenty years art has been presiding here, and gaining one beauty after another from nature. It is almost impossible to believe one's eyes. Around, a sterile, black, or ashy-grey soil, and in the gardens, the most magnificent vegetation, for which southern Europe, the East, and even America, have been laid under contribution.

The contrast is, indeed, extraordinary, on emerging from the inanimate and yet majestic realms of nature, and entering the beautiful park of the prince, which is adorned with every possible charm. We have scarcely time to regard the partly wondrously-beautiful, partly strange groups of the world of plants and the barren rocks. Every twenty paces something new offers, which bears no comparison with what was seen just before. If I must find fault with something, it would be by stating that there are not only too many beauties in the confined space, but they appear even too magnificent. The transition from one object to the other is wanting. The eye is incessantly occupied: there is no point on which it can rest, if only for a moment, and refresh itself. The effect is powerful, and yet they follow in too rapid succession. I should desire that all I saw here were extended over a space many times larger. The body, too, requires resting-places—arbours, grottoes, &c.—where it can find a refuge.

The artist would here find abundant scope for his talents, and, at the same time, increase his feeling for the beautiful; and yet he would meet with a difficulty in limiting the size of his picture, for there is too much in a small compass, even for him. But he might fill his sketch-book with studies, which he could, most assuredly, apply to a good purpose hereafter.

Art has toned down the most savage spots; plants have been placed in artificial cavities, and others display their refreshing hues amidst the masses of rock. Ivy, periwinkle,

and coltsfoot have been principally employed. At other spots masses of rock have been piled on each other, in order to produce a species of natural grotto, and, at the same time, obtain a hollow, which has been converted into a pond, where tortoises reside. Our northern bulrushes grow here by the side of the Æthiopic calocasias (*Richardia Africana*, Kth., *Calla Æthiopica*, L.), and the dark-brown flowers of the former contrast with the white blossoms of the latter, more especially as the leaves of the two plants have a perfectly different shape. Splendid weeping willows sweep the surface of the water with their pendulous branches.

Although the climate here differs but little, from that of southern Germany, and the cold frequently reaches ten or twelve degrees, still, a variety of plants, principally shrubs, flourish on the undercliff, which do not prosper among us. Thus, we scarcely ever see their evergreens; but they are of extraordinary value in a landscape. Here the evergreen buckthorn (*Rhamnus Alaternus*, L.), with the Phillyreæ, formed thick hedges, like the white and black thorns among us; their bright, beautiful green leaves enliven the plantation, and form a contrast to the laurel, with its dark lustreless leaves. Above these again rose melancholy cypresses, the symbol of the dead in the Mohamedan cemeteries.

Herr Kehlbach was so kind as to be himself our guide. He drew our attention to much that would probably have escaped our notice, owing to the short time allotted to us. Among other things, he showed us the two immense cypresses which Prince Potemkin, the celebrated favourite of the great Catherine, is said to have planted during his mistress' visit to the Crimea, in 1787. It is an interesting fact, that all the cypresses now to be seen in the Crimea are cuttings from these.

In the artificial gardens of Germany, we seek in vain for that variety of trees and foliage which here meets the eye of the observer. In our woods there is no great distinction in the form of the leaf; the most prevalent is that long leaf which we find in our beeches, fruit-trees, poplars, and willows; less frequent are the larger more rounded leaves of the lime and maple varieties; still more rare among us are the trees with pinnated leaves, at least in our older plantations. Almost the only varieties seen there are those of the walnut and sumach, the acacias and elders, and even these are not employed in such a way as might be desired. It was left for a

later age to summon up a greater variety. To the master of landscape gardening, the Director-General of the Royal Gardens at Sans Souci, Lenné, is all merit due for giving a good example, and promoting the plantation of these trees by the Royal Botanical Schools.

I may be permitted to give a sketch of the trees I noticed in the beautiful park of Alupka. Here stood a fig or paper mulberry bush, with its large leaves and widely-extending brown branches; and above them both towered the lotus tree (*Diospyros lotus*, L.), or the turpentine pistachio; then the Italian oak; the pointed-leaved ash formed the background, while the foreground was occupied by the locust tree (*Cercis Siliquastrum*, L.), the silver protea (*Elæagnus hortensis*, Bieb.); the two trees of life (*Thuja orientalis et occidentalis*, L.); and the shrubby jasmine. Then the walnut tree, the Eastern and Western planes, the tulip tree, the large-flowered as well as the sharp-leaved magnolia, the mulberry tree, with purple and white fruit, &c., strove to attain higher regions. By their side, again, might be seen the delicate-leaved acacia of the East (*Acacia Julibrissin*, Willd.), the only variety of that family which lives so far northward on the old continent, namely in 44°, and the weeping ash, with its yellow depending branches, which are only scantily covered with foliage.

A covered walk appeared to me unique in every respect. A row of roses, flowering at various periods of the year, had done its best to give the garden a rare charm at all seasons, save when Boreas put a check on vegetation. At the period of their flowering, or in May, this walk must indeed be exquisite. Tea and Banksian roses, which do not survive the winter among us, resist the frost on the southern coast, if slightly covered.

There were, unfortunately, too few lawns; and, besides, the few there are, are covered with groups of trumpet trees (*Catalpa syringæfolia*, Sims), Japan quince trees, mahonias, hortensias, &c., and here and there bordered by laurustinus (*Viburnum Tinus*, L.), rosemary, oleander, Spanish broom, and the shrubby thorough wax.

But even if lawns were desirable, I missed in a still higher degree a garden house, or pavilion, or even arbours. Every attention has been lately paid to the decorations of the château. The principal buildings in the park are, a very pretty mosque, with a tower; a temple, supported by Doric

pillars; the former château, the residence of the gardener, and an inn.

Prince Woronzoff does not visit this place often enough; were it so, he would assuredly extend the plantations—a very necessary alteration—to the foot of the precipice; and bring the latter, if only partially, within the limits of his fairy-like territory. It would be a field worthy of a Sir J. Paxton; such a man would assuredly animate the sterile rocks, and give them a more friendly aspect.

I will now turn to the description of the château, the Crimean Alhambra. I was told that the plans alone, which were prepared in England, the country in which the prince was brought up, and which he so loves, cost the sum of eighteen thousand silver rubles. It is not a matter of surprise, then, that the château itself had cost nearly two millions of dollars, and then was not quite completed.

Upon a level plateau, which, however, is too small for the immense building, and nearly one hundred and sixty feet above the sea, stands the new château, composed of the main building and two wings. It is built in the Saraceno-Gothic style. The material is generally the same greenstone which I have repeatedly mentioned, and is found close to hand, in immense blocks. In addition, a greyish-green and fine-grained sandstone was used for the foundations, which is obtained rather further to the east, in the vicinity of Nikita. I do not think the selection of the first-named stone was advisable, for, although the green stone, through its hardness, can defy ages, still its uncertain colour is not at all favourable to the building. On *terra firma*, unfortunately, there is no suitable spot from which a good view or even *coup-d'œil* can be obtained; these can only be found out at sea, and at some distance from shore. But, through the greyish-green, I might say undecided, colour of the stone, it is not possible clearly to distinguish the outline of the magnificent building, all the pinnacles, towers, and other ornaments do not strike the eye with such clearness at this distance, and are blended into one confused mass.

The workmen were still busied in the interior of the building when we inspected it, and so I could not realize the effect, which, in another case, the château must inevitably have produced. The apartments are generally spacious, lofty, and comfortably arranged; they so far deviate from the Gothic style, that the little closets and other unoccupied spaces are

not found. As far as I am concerned, this is undoubtedly a gain. The regulations have been rigidly adhered to with respect to the stairs, for they are so narrow, that a gentleman could not lead a lady down comfortably, particularly if either of them had the slightest tendency to corpulence; the stairs leading to the terrace are still narrower, so that a person of respectable size has the greatest difficulty in climbing up them.

The front of the main building is occupied by the magnificently decorated dining-room, which can be converted into an open hall by the removal of the windows. I was informed, however, that it cannot be used during the warmer season, as it grows insupportably hot, facing as it does the south. Could not a ventilating apparatus be applied near the ceiling, which would not have any injurious effect on the occupants? A cascade, or even a fountain, would also lessen the heat, and, in addition, augment the beauty of the apartment. Best of all, however, would be a couple of plane trees in front of the house. Their trunks should be tall enough not to prevent the prospect; their summits would then ward off the scorching rays of the sun. Probably, too, the greenstone, as an excellent conductor of heat, does a good deal in heightening the temperature during summer in the other rooms. According to Herr Kehlbach, only those rooms in the rear or looking on the cliffs, are habitable at that season.

Of the two wings, the eastern is arranged for the reception of the prince's family. On the ground floor are the princess's apartments, and her usual sitting-room is decorated in the Chinese style. The carpets here are manufactured of straw. The upper apartments, with the exception of the princess's bed-room, belong to the prince; they are less decorated, and agree better with their occupier's simple tastes. The right wing is composed of a number of smaller rooms, which are employed for the reception of guests. The roof is a flat terrace, from which a magnificent view of the neighbourhood and the lovely azure sea is enjoyed. Any one, however, who is not satisfied with this, can ascend one of the two towers which rise in front in a quadrangular form. A balcony is attached to the main building for the same purpose.

The sun had just risen from behind the mountains when we were once again seated in our post-chaise on the 26th September, and drove toward our destination, Yalta. If we had

formerly travelled too slowly across the melancholy pampas, in this instance it was the reverse. In vain did we shout to our postilion *potische* (slower), the bearded coachman insisted that he must reach Yalta betimes. He naïvely remarked, in addition, that other travellers had always complained of his slow driving. A little fee, however, as is generally the case, effected more than all our arguments. But for all that, he drove too quickly. We consoled ourselves at last with the prospect of being able to look at it all hereafter with greater leisure.

Alupka is situated on a bay, bounded to the west by a promontory, called Merdven. Towards the east the declivity runs further out to sea, and its extremity is surmounted by a lighthouse. Further to the east the sea again forms a bay, but of much greater extent. In its centre lies Yalta, the chief town of the southern coast. After crossing the summit of the acclivity which separates the bay of Alupka from that of Yalta, the character of the scenery changes, like that of the vegetation. The precipices retire further inland, and do not rise, as previously, perpendicularly, but are broken up into terraces, whose margin is begirt with a scanty growth of wood. The shore also changes its character; it does not descend in a curve towards the sea, but forms several terraces, which, however, do not run regularly along it.

A better, at times more luxuriant, growth of wood is here perceptible, and extends for nearly a mile and a half up to the great precipice. While, beneath, the pleasant verdure of the shrubs and its varied shades formed the most agreeable picture, with the azure sea, on which God's blessing seemed to rest, and the blue canopy of heaven stretched out above it; on the other side, the gloomy, dark-hued Tauric pines, with their horizontal branches, that capped the precipice, were adapted to produce a melancholy feeling on the mind of the traveller.

The first plantation of a larger size which we reached was Little Oreanda. It seemed, in fact, as if men had only needed to build dwellings here. The beautiful property belonged to General Leon Narischkin, a descendant of the mother of the celebrated Natalie Narischkin, whom Peter the Great chose as his second empress, not so much for her dazzling beauty as for her eminent talents. When the Grand Duchess Helena Paulovna paid a visit to this spot, and was charmed with all

she saw, the gallant Russian placed the whole estate at the disposition of the sister-in-law of his Emperor for life.

A smaller, but not the less beautiful, estate is situated towards the sea, and near the promontory on which the light-house is erected. It bears the name of Gaspra, and belongs to a Prince Galitzin, who was formerly postmaster-general, and was forced to resign his functions through an operation that was performed on his eyes. He was residing here at the time, to enjoy the benefits of a southern climate.

We soon reached Great Oreanda, the lovely palace of the Emperor. Unluckily, the road here runs through dense woods, and a low, odious wall interrupts the prospect of the beautiful park. At last we arrived at Livadia, indubitably the most exquisite spot on the whole southern coast. It belongs to Count Potocki, Russian ambassador at Naples. Instead of a wall there was a simple railing, which gave us an opportunity of admiring the exquisite plantations from the high road. From this place the road ran down to Yalta.

Yalta and Alupka further to the east are the only places on the southern coast where alluvium has been deposited, and where it is possible to walk for a few hundred yards on perfectly level ground. The coast range not only recedes here further from the sea, but there is a deep fissure in the hitherto uninterrupted cliffs. Through this gorge bounds a merry, rapid stream, which collects all the streamlets around, then rushes noisily over rock and stone, and carries down a quantity of rubble into the sea. It can be scarcely credited, but the Yalta is hardly three miles long, and yet it has formed—of course in many centuries—the small alluvial plain which has gradually been deposited on the coast of the large bay. In two or three thousand years more, it will be probably many times as extensive.

This little level has been employed for the establishment of a town, which was intended to serve as *entrepôt* for all the various estates and villas. Yalta is called a town, but it only consists of some forty houses, forming one street. The tradesmen living here scarcely deserve the name, as they only satisfy absolutely necessary wants, and are not able to provide the slightest thing beyond them. The families living on the south coast are generally compelled to get all they require from Simpheropol, and must consequently lay in a large stock at once. The Russian government has indeed done every-

thing to provide the inhabitants of the south coast with methods of communication, especially with Odessa, and to raise Yalta, but all in vain. Every fortnight a vessel calls here *en route* from Kertch to Odessa, and *vice versâ*. For the protection of the shipping, the Russian government has also built a breakwater, behind which, however, a vessel rarely seeks shelter. If you inquire after the reasons, they are as plenty as blackberries. The south coast is only a very narrow strip, principally occupied by Tatar villages and the châteaux of the Russian nobility. A very large portion also is so infertile that it renders any attempt at cultivation a sheer impossibility. The Tatars are generally well off, but their wants are of such a nature that they can satisfy them by their own exertions. On the other hand, they rarely cultivate more than is just necessary for their own consumption. They only sell sheep and fruit. The sixteen Russian families (rarely so many), who reside here from May to September, are too few in number to produce any great demand. With the exception of fresh meat, eggs, milk, butter, and vegetables, they bring with them all they require, and even the above are usually obtained from their own farms. The inspectors and bailiffs resident here all the year round, are without exception farmers, and, consequently, produce nearly everything they require.

The position of Yalta is exquisite. The few houses in the foreground, the precipices, rising to a height of 4000 feet, which surround it in the shape of an amphitheatre, and in the rear, between the two, the declivity displaying every hue of vegetation, and which rises to a considerable height in the above-mentioned ravine, and is covered with detached villas; all this forms a beautiful picture, though too large a surface for an artist. On the western side lies the pleasant Livadia; while, on the eastern, precipitous rocks tower, and run down close to the sea, where they enclose the haven.

In the afternoon, we made a little excursion to Maharatch, the country seat of Prince F. B. Galitzin, which lies just on the other side of the rocky promontory. At Yalta, the formation of the mountain range alters so far, that clay-slate is more frequently seen, and no eruptions of a Plutonic rock have taken place. The former, however, does not compose the whole of the acclivity; but, in the vicinity of the cliffs, its place is taken by a very fine grey-green or red sandstone. The cliffs themselves are formed, as formerly, of the same

Jura limestone which I have already mentioned on several occasions.

Maharatch is the name of a Tatar village, which formerly existed here, but has been deserted for a length of time. The soil, which is more or less sterile, has fallen into several hands, and the result has been, the erection of several pretty villas; the handsomest of all is Prince Galitzin's. In 1838, I had been most hospitably received by the family at Odessa, and passed in their house the terrible period when plague and earthquake caused all the inhabitants of the town to be in a fearful state of alarm and anxiety.

I was very sorry to find that the prince's step-son, Prince Constantine Suworrof, was absent, and had been residing for the last few weeks in St. Petersburg. I owe the excellent grandson of the great hero of Italy my most cordial thanks for his treatment of me during my early travels. Not only did he assist me most cordially at Tiflis, where he was then staying, by word and deed, but, when I was thrown on a bed of sickness, at the foot of the classic Ararat, and after hovering for several days between life and death, returned to Tiflis, recovering very slowly, he took me into his hospitable mansion, and nursed me himself in the most touching manner. In his society I afterwards travelled to Odessa, and found, in the house of his parents, a reception which only the friend of a beloved son could expect.

The Princess Galitzin devotes herself to the improvement of the already beautiful grounds. The greater portion, if not all, was owing to her creative genius. The talented lady contrived to draw from nature her most hidden beauties. Not only was she acquainted with the Latin names of the numerous ornamental shrubs and trees, but also told me those of the plants and weeds, which grew here spontaneously. I could not have inspected the gardens, which, though not large, are highly interesting, with a better *cicerone*. The princess has perfectly succeeded in employing the various colours and forms of the trees in a manner which is rarely met with. A cypress grove appeared to me inexpressibly charming. The paths were so arranged, that no beautiful spot in the park could escape attention, and they ran in a pleasant serpentine form from one group to another.

Although the château, as regarded size, could not hope to compete with those of Alupka and Oreanda, still its situation possesses charms which are not to be met with in those larger

buildings. It lies in the centre of the most attractive verdure; the shady, widely-extending branches of the neighbouring trees, even partially adorn the open portico of the southern façade. From this spot there is a fine prospect of the sea, which appears truly illimitable. At the time of my visit, a few sail happened to be crossing the placid waters, and heightened the beauty of the scene in no ordinary degree. Here I remained seated with the amiable family till late in the evening. I unwillingly bade adieu to them, and returned to Yalta.

The next morning (27th September) we had set aside for an inspection of the garden at Nikita, which is celebrated not merely in Russia, but through all Europe. When day dawned, we were once more seated in our little wagon, and drove through Maharatch to the garden. On the road lies the village of Masandra, so concealed by trees that only the gables of one or two houses can be distinguished. On an open spot, a small church, not unlike a temple of Theseus, but, of course, without columns, has been erected. The view which can be enjoyed thence in every direction is, however, much finer than the church.

The road afterwards ran, close by the clay-slate and the fine-grained sandstone already mentioned, to Nikita, a handsome large village, near which the celebrated garden is situated. Splendid walnut trees here beshadowed the small but clean houses, which afforded a pleasant prospect far and near, through their being built in terraces.

The garden lies lower, and runs down as far as the sea. Unfortunately, Herr von Hartwitz, the director of the Imperial gardens, was absent from home; but this did not in any way prevent his amiable lady from receiving us, and paying us every attention, until his return. This was another instance of that Russian hospitality which I had abundant opportunities of experiencing during both my travels. Nikita owes its establishment to the distinguished botanist, Herr von Steven, to whom I have already referred. Forty years ago, he drew the attention of the government to the necessity of establishing an universal nursery for the extensive and generally unwooded Russian provinces, and soon received the authorization to establish one in the Crimea. Herr von Steven was just the man to overcome all the difficulties which, as may be supposed, presented themselves. In a short time the garden was established, and gained annually a greater

influence, not only in the Crimea, but in the southern provinces of the Crimea.

After Herr von Steven had honourably presided over the establishment for ten years, he was summoned away, and a more valuable mission was intrusted to him. In St. Petersburg, a great value was justly attached to the improvement of botany in the southern provinces; but it was fancied that enough had not been done by the mere foundation of such an establishment as Nikita. A man was required who would not only draw the attention of the inhabitants of the Crimea and the Cis-Caucasian provinces to the advantages of growing fruit and grapes, as well as breeding silkworms, but, at the same time, help them by word and deed. No better selection could be made than that of Herr von Steven. All that has since been done in the way of cultivation in those countries, has emanated from this distinguished savan.

In Steven's place, a Livonian gentleman, who had distinguished himself in the war of liberation, and had a partiality for horticulture, was appointed. Herr von Hartwitz soon found himself at home in his new occupation. He zealously studied all the most important French and German works bearing on horticulture. For seven-and-twenty years he has presided over the institution, and has been the chief cause that it gained entire recognition, not only in the Russian empire, but beyond it. This is the more meritorious, as the garden is far from being endowed with the same resources as is generally the case with institutions of this nature in Russia. Formerly, the director received, in addition to his own salary of 5000 rubles ass. (or about 250*l.*), only a sum of 10,000 rubles to be applied to the garden. Very recently, this sum has been increased one-half. In addition, the garden, by the sale of shoots, cuttings, &c., acquires an income of the same amount. The whole sum, then, that the director can employ on his garden does not exceed 20,000 rubles ass., or about 1000*l.*

Prussia has a similar institution—the Royal Nursery at Potsdam—which is under the special management of the Director-General, Lenné, at Sans-Souci, and is in such a satisfactory position, that it is not only self-supporting, without any assistance from the State, and regularly pays a species of ground-rent for the land it occupies, but also has funded property from its surplus receipts. We do not wish, however, by this comparison, to cast the slightest reproach on the

garden at Nikita, for we must bear in mind the difficulties arising from its remote situation with regard to the other countries of Europe where horti- and floriculture flourish, the want of gardeners in Russia, and what workmen cost on the south coast: the apparently large sum of 1000*l.*, for such an institution, will be found very moderate.

The gardens of Nikita provide nearly the whole of Russia with the cultivated varieties of fruit and vines; but, in addition, a quantity of ornamental shrubs and forest trees are sent to every quarter of the empire. The prices are so low, that persons of small fortune are able to obtain whatever they may require from the imperial nursery. A thousand grafts or vine-slips only cost about one-and-a-half dollars in the Crimea, double the amount in the other provinces. As we know, then, that sales to the amount of 1500 dollars take place annually, and that two-thirds of this amount is obtained for cuttings, it may be easily calculated that above half a million are sent yearly in every direction. Assuredly a very satisfactory quantity!

In the cultivation of fruit and grapes, Herr von Hartwitz followed the highly correct principle of "*non multa sed multum*," and, therefore, removed every variety of which he had convinced himself either that they did not deserve any attention, through their moderate character, or demanded too much care. In such cultivation, the produce and the goodness must be in a certain ratio to the care devoted to it; and the husbandman—and this is equally true for other nations beside Russia—must not be allowed to select such sorts as demand excessive attention. Such matters must be left to the professional gardener, as the husbandman has neither the necessary knowledge nor time which such varieties demand.

The fruit I ate here possessed more aroma than what I had purchased in Simpheropol, even without the market. The pippins, of which several new varieties have been produced, were of an excellent quality. Less attention was paid to the pears. This fruit I found nowhere good in Russia. According to Herr von Hartwitz, they grow very poorly, and never have that aroma and delicious taste which are found in Germany. Of the numerous plums grown here, one which was pointed out to me as the August plum was excellent. I was too late for the apricots, but great quantities are grown. The late peaches had no particular value. The almonds grown here seemed to me very fine: but the plantations are

much too small for any profit to be derived from them. With evident satisfaction, the director led us to his vineyards. The cultivation of the grape is the favourite employment of the country gentlemen here, and costs the government, as well as private persons, immense sums. Nearly four hundred varieties were cultivated. The whole of Europe, as far as Lisbon, Madeira, southern Africa, Asia from Tiflis to Schiraz, and even North America, were laid under contribution to furnish their best grapes for the south coast of the Crimea. No expense has been spared to obtain any celebrated variety from even the most hidden corners of the earth. But all of them have, more or less, lost their peculiarities on the Crimean soil, and retain nothing but the name. The early Würtzburg, the Rhenish Riessling, the Palatinate Traminer, the much-admired Bordeaux, &c., I certainly recognised, in some measure, by their leaves, but not by their fruit, and much less by the wine produced from them. Only the two American sorts, which are also grown in Germany under the name of Catauba and Isabelle, for the sake of their beautifully-shaped leaves, had remained the same, and had undergone no change. It is another question, however, whether they do not differ from the real North American vines. On eating the grapes, I noticed a peculiarity which all the Crimean varieties, with very few exceptions, have in common—a very thick and rough skin.

Herr von Hartwitz afforded us an opportunity of tasting the different varieties of wine produced here. I am too little of a connoisseur to be able to form an opinion. According to persons conversant with the subject, however, the produce is in no proportion to the expense incurred. I have already had occasion to speak of the high price of the Crimean wines. In Odessa, which, it is true, is a free port, and admits foreign wines at a low rate of duty, the good Crimean Bordeaux always costs rather more than the equally good and real wine from France. From this cause, only the poorer sorts are sent there, and they always command a high price, while the better sorts are only found on the tables of families who have grown it themselves, or is drunk through patriotic motives.

The Crimean hock has lost its aroma with its acidity. I also missed the leathery taste in the Bordeaux. On the other hand, in Nikita, and still more at Maharatch, at Prince Galitzin's, such excellent wines are grown as would merit the approbation of the most skilful wine connoisseurs. We were,

however, told that the preparation of these sorts required extraordinary care. It was impossible to introduce them into trade, unless a great loss was sustained, or fearfully high prices demanded.

It is, besides, the general opinion, even of the wine-growers in the Crimea, that, although great care is devoted to the cultivation of the grape, they possess very few persons who can properly superintend it. Enormous sums have been expended in fertilizing the sterile soil; vines of every sort had been obtained from every quarter of the globe, at almost an equal expense; and vine-dressers hired who cultivate the grapes with the necessary care: but they want coopers who understand the management of the wine during the process of fermentation, and—it will be scarcely credited—the proper and suitable apparatus!

Herr von Hartwitz also devotes his attention to horticulture, in the more restricted sense of the term. With great perseverance, I had almost said obstinacy, he attempts to acclimatize foreign shrubs and trees. Thus all the East Indian roses, which we know under the names of Semperflorens, Noisette, Grevillea, Banksia, Thea, and the countless bastards, live here in the open air during the winter, and are only covered when a severer season than usual is anticipated. *Cobæa scandens*, Cav., red and blue passion flowers (*Clematis azurea*, Sieb., and *Florida*, Thunb.), *Tecoma radicans*, Juss., and other creeping plants, wind round the arbours and trees in such a luxuriance, as if this were their native land. I saw large patches of land covered with olive trees; but the Russians will never succeed in introducing the cultivation of olives on the northern coast, when it has been proved to be a failure on the southern coast of the Black Sea. The frequent and generally unexpected frosts, which set in in March, kill the trees by wholesale. The cold nights which are also met with in the spring have a very injurious effect on all the young shoots.

We noticed, also, many cork trees here. The cork substance, however, was so slightly developed, that I did not see much more than could be found on our small-leaved elm. I have already expressed my opinion that the cork, as well as our small-leaved elm, must not be regarded as a distinct species. *Quercus Ilex*, L., grew here among the cork trees (*Quercus Suber*, L.), and could not at all be distinguished from the latter, save by the absence of the cork substance,

As regards the small-leaved elm, the species which is generally found in Germany, and is only a bastard of the *Ulmus campestris*, L.—that is, the common elm—must not be confounded with the *U. suberosa*, Juss., or Sicilian elm, or the sort belonging to the Caucasian flora.

Just as nearly all the wine-producing countries have furnished their contributions to the Crimea, so, on the other hand, nearly every country in the world has been ransacked for varieties that would adorn the plantations. Only the varieties that grow immediately in the Tropics, such as palms and ferns, are not represented. The Caucasian territories and North America had furnished the most numerous specimens. From the former were obtained, among others: *Gleditschia caspica*, Dsf.; *Pterocarpus caucasicus*, C. A. Mey; *Rhododendron ponticum*, L.; *Azalea Pontica*, L.; *Pinus Nordmanniana*, Led.; and *Hedera colchica*, C. Koch. From the latter many varieties of oaks; among them the lofty *Quercus coccinea*, Wangenh., and *Palustris*, Dur.; magnolias, gleditschias, the Weymouth pine, the Canada pine, &c. Siberia had sent its peculiar larch; Northern Europe, among other varieties, all its firs; Ireland its peculiar yew and ivy; Spain its beautiful *Pinus Pinsapo*, Boiss.; the Balearic Isles, *Buxus Balearica*, Lam.; the Canaries, *Viburnum rugosum*, Pers., and *Oreodaphne foetens*, Nees; North America, *Viburnum Tinus*, L.; Southern Africa, pelargonias, *Myrsine africana*, L.; Syria, *Hibiscus syriacus*, L., and the cedar; Persia, the *Acacia Julibrissin*, Willd.; Asia Minor, *Celtis Tournefortii*, Lam.; the Himalayas, several varieties of rhododendron and the cedar that grows there; Nepaul, the *Benthamia fragifera*, Endl.; the East Indies, *Jasminum grandiflorum*, L., *Thea Bohea bengalis*, L. *β.*; China, *Lagerstræmia indica*, L., *Illicium anisatum*, L., *Olea fragrans*, Thunb.; Japan, camellias, *Gingko biloba*, L., that rare broad-leaved pine; California, the *Pinus Sabiniana*, Dougl.; the American highlands, mahonias, fuchsias, escallonias; the lowlands of America, *Agave americana*, L., *Alstræmeria Ligtu*, L., *A. psittacina*, Lehm.; the La Plata states, *Mahonia diversofolia*, Sweet; New Holland, *Acacia dealbata*, Lk.; and finally, New Zealand, *Phormium tenax*, Forst.

The inspection of the gardens of Nikita had occupied the entire afternoon, and was continued on the following morning. Herr von Hartwitz furnished me with so much that was

instructive, that I willingly gave my time to him, and we did not quit his hospitable abode till the second day.

On our return to Yalta we stopped at another estate near Maharatch. I had formed the acquaintance of its owner two days previously at Prince Galitzin's, and had besides brought letters of introduction to him. It was Major Frömbder, the same officer of engineers to whom we are indebted for the excellent road of communication with the south coast. His estate differed considerably from those I had hitherto seen. With the exception of the Nikita gardens, the country-houses belong to the nobility, who only spend a part of the year there; they are consequently only devoted to pleasure, and profit is merely an afterthought. Although Major Trömbder's house is not only habitable, but very comfortably arranged as well, the principal care is devoted to the vineyards. With great trouble the proprietor has rendered the slate-clay soil fertile, but has commenced to derive a very considerable reward for his exertions from it.

The primitive vegetation I noticed here was very poor. I only remarked a few hieracias and teucrias. The downy-leaved oak, the Eastern whitethorn, junipers, and sallows were prevalent, but grew to no very great size. Only the mountain ash, whose small red berries are called in Germany, Mother Eve's pears, grew to any considerable size.

A fearful storm arose toward evening, and induced us to accept the major's polite invitation to spend the night at his house. Storms are more magnificent on the sea-coast than they are inland; on the southern coast of the Black Sea, however, they frequently assume such a menacing character, that the strongest trees are snapped in twain, and ships are sunk. This may be the principal reason why no trees of any very large size are found, even on fertile soil. Besides the piratical inhabitants, the frequent storms indubitably originated the appellation of the inhospitable sea, *ἄξενος πόντος*, which the Black Sea bore in the earliest ages. These storms frequently form whirlwinds, and raise earth, stones, trees, and shrubs aloft, which they suffer to fall again, frequently at a distance of many miles.

It was not till midnight that the fury of the elements became at all appeased: till that time the storm howled, and the waves rose to a fearful height, as they dashed against the rocky coast. Woe to the vessel that finds itself near the coast at that time, for it is irrevocably lost. Fortunate are

the crew if they succeed in reaching *terra firma* in their light boats.

The next morning we rode back to Yalta, where we had been long expected. The news had arrived that the steamer, which keeps up the communication between Kertch and Odessa, had been injured, and had been taken off the station; but another steamer had been put on by the Russian government. We waited, however, the whole day to no purpose, and decided that we would make some more excursions into the lovely scenery that surrounded us.

CHAPTER VIII.

OREANDA AND LIVADIA.

The gardener's house—Herr Rögner—Volcanic eruption—Fine view—Vegetation—Three excursions—The first wall of rock—The tall juniper—The château—Batatas—Two rocks—The park—The second and third walls—The Tauric pine—The arbutus—The fourth wall—Ivy plants—Majebi—A storm—Livadia—Count Pototzki—Pretty grounds—The château—View—Lawns and beautiful plantations—Want of grottoes and summer-houses—Little Oreanda—The juniper with red berries—The mistletoe—Cape Aithador—A lighthouse—A herbarium—Crimean plants.

On the 1st October I walked to Great Oreanda, which is also called the Imperial. There is a cottage close to the high road, embowered in a pleasant nook, naturally formed by four precipitous walls of rock. Nasturtias, cobœas, passion-flowers, maurandias, and jasmines were so interlaced over the walls, that the latter could not be seen. By its side were flower-beds of bright red fuchsias, blue sage, different sorts of euphœas, bouvardias, and other plants found in our gardens, and remarkable for their gay colours. Above them rose myrtles, laurels, phillyreas, and the evergreen buckthorn, forming an agreeable contrast by their dark, lustreless foliage, to the lovely flowers in the foreground.

This isolated house was at that time occupied by a talented gardener, Herr Rögner, a Hanoverian by birth, and now inspector of the Imperial gardens at Kutaiss, in Trans-Caucasia. I willingly accepted his kind invitation, and spent more than a week in his agreeable society. Although the hospitable reception I met with from a countryman did my home-sick heart a great deal of good, I was still more delighted with Herr Rögner's exertions in the cause of science; and his accurate acquaintance with the southern coast, more especially in a botanical sense, taught me much that was both valuable and interesting. His company was of the greatest service to me in my excursions, far or near.

Oreanda was selected by the Emperor Alexander and his consort as a place where they could retire in the summer

season far from the busy hum of men and cares of state. Surrounded by rare natural beauties, the emperor was enabled to lead that social and contemplative life for which he longed so much in his later years. Death suddenly fell upon him at Taganrog, and the Empress Elizabeth soon followed him to the other world. The Emperor Nicholas made this beautiful property a present to the Empress Alexandra (Charlotte of Prussia). She visited Oreanda in 1837, but, as far as I understand, has not been there since. In the same year an English architect, a Mr. Hunt, was commissioned to build a château worthy of the noble owner, but at the same time harmonizing with the lovely scenery, while to Herr Rögner was intrusted the care of aiding nature in the development of her charms.

The situation of Oreanda, as I mentioned before, differs materially from that of Alupka. The fiery god, Vulcan, who had once established his workshops in the nether world, violently assailed the roof of earth above him, but was unable to obtain an egress for the stone stored up in readiness within. The thick beds of limestone are here and there turned perpendicularly upwards, but at other spots are shattered, and the fragments hurled into strange forms. Thus, then, the rocks have stood for ages in the shape of precipices, several hundred feet in height, and bear upon their summits other masses of rock, which threaten at any moment to fall into the depths beneath. But since that period, Vulcan has retired further into the earth; only at a few spots do his fire-emitting cavities project above the valleys in which mortals dwell.

Oreanda consists of a steep acclivity, bounded to the north by a wall of rock rising to a height of nearly two thousand feet, while in the south it is washed by the at times turbulent, at others peaceful, sea. The view on either side is more extensive than at Alupka. Westward, it extends as far as St. Theodore (Aithodor), i.e., the promontory on which the previously-mentioned lighthouse stands; while towards the east the bay of Yalta stretches out. Close to the sea-coast lies the little town of the same name, formed of a single street. Then comes a promontory, which appears to form a portion of the wall of rock in the rear. Behind it lies Maharatch, with its Tatar houses and estates. From Oreanda the finest view of the cleft can be obtained which separates the cliffs into two portions, and is formed of terrace-shaped acclivities.

Within it there are several country-houses, almost imbedded in woods.

The view is not only more extensive at Oreanda than at Alupka, but the surrounding scenery is also different. The savage character is only softened down in Alupka by the plantations; it has been rendered more romantic, but is still more or less wild. In Oreanda not a trace of this savage scenery can be found; the larger space softens down the primeval convulsions on the surface; the rain descending from the skies cannot penetrate so deeply as to flow to the sea through the subterraneous channels, but is collected in chasms and fissures, which lie above the surface of the water. At various spots, streams well up from the ground. But water, together with the necessary warmth, is the principal requirement for the growth of plants, which, consequently, appear here much fresher, and in larger numbers, than at Alupka. The dark grey or black soil, which is always found where there is no cultivation, is sought in vain at Oreanda. On all sides, the oaks, beeches, &c., are of a healthy green colour; even the rocks do not present a perfectly naked surface; not only varieties of lichen, but also silenas (catch-flies) are seen on it; while mural gypsophil and campanulas have generally overgrown it. In addition, ivy, juniper, arbutus, and similar shrubs grow upon it. Even the Tauric pine has descended from the edge of the Yailas,* and has settled here and there on projections of the rock.

I have now given a general description of the position of Oreanda, and will next attempt to describe the impression the various excursions I made had upon me, and clothe my reminiscences in words. I shall only be too glad if I succeed, by simple observation of nature, and the charms she has developed with an unsparing hand, and by a faithful account of what I saw, in giving merely a faint description of what even an artist could not depict in all its magnificence. Descriptions of this sort are generally too much neglected, I am sorry to say. Travellers yield to the effect, but do not think it worth while to paint it in words. On the other hand, such reflections and descriptions lead us back to nature, from whom the study of books has caused us to stray so far away.

We started from our pleasant abode on a fine morning, to form the acquaintance of the scenery that lay beneath us towards the sea. One of the four walls of rock, among

* The Russian name for mountain pasture lands.

which the house was enshrined, was first surmounted, to enjoy a *coup-d'œil* of the scene of our excursion. It lay beneath us to the west. A serpentine walk led through pleasant shrubs to the summit, where isolated rocks lay in strange confusion. Undoubtedly, the elevation was the primitive surface, which was raised in masses by an eruption, and now rests in the form of a cone on the rock. It is a very curious sight; one rock stood perpendicularly, another leant obliquely against it, and so formed a chasm. A third, again, lay in a horizontal position on the top of the first, and had remained in this menacing position probably for thousands of years.

On reaching the top, it is difficult to decide in what direction to look first: the eye wanders from one point to the other, from the foreground to the horizon, and back again, until one gradually grows sufficiently calm to enjoy the prospect at one's leisure. In order to do so, I seated myself on a rustic bench, and so contracted the prospect. Before me were the already-mentioned gigantic blocks, which were supported in their position by some smaller rocks. By its side yawned a deep chasm, like the jaws of a wild beast. On the other side of the bench stood two rocks, opposite each other, and forming a species of gateway, through which the road ran. Behind me I saw a primeval *celtis orientalis*, with dark, lustreless leaves, and withered orange-coloured berries. Between the gateway and another rock grew a magnificent pistachio (*Pistachia mutica*, Fisch), indigenous to this country, with a twisted trunk, which had grown crooked through its position; its widely-spreading branches formed a natural roof for the gateway. Further in the front, and just on the verge of the precipice, stood a splendid specimen of one of those junipers (*Juniperus excelsa*, Bieb.), which, instead of needle-shaped leaves, like the arbor vitæ or the cypress, have close-pressed pulpy scales, and of a larger size than I ever saw in the Crimea, though I had found similar ones in the valley of the Tchoruk; the trunk itself was no less than three and a half feet in diameter. If we bear in mind that the juniper grows very slowly, indubitably it had required more than a thousand years to attain such a size. It is, consequently, the only tree which saw all the various nations come and again depart at the period of the great Migration.

I at length left the bench, in order to gaze on the distant view. There I stood on a cliff, and gazed from my dizzy

elevation far out across the sea, on whose dark blue waters a few ships, with their white sails, were slowly drifting As far as the eye could reach was the same boundless expanse of water. I stood here again frequently, especially towards evening, with my face turned towards the setting sun, which would still for a long while pour its blessed beams over my beloved fatherland, but at last disappeared beneath the western horizon.

Far beneath me, and on the right, a gently sloping plain lay extended. It was chosen as the most suitable spot for the erection of the Imperial Palace, and was consequently rendered still more level than it originally was. Towards the sea it was bounded by two gigantic masses of rock. The most beautiful shrubs everywhere covered the country. They were even almost too numerous, for those meadows and lawns on which the eye is glad to rest, when so much is offered for its inspection, were wanting. On the right hand was another lofty wall of rock, and it bore on its bald verge a few Doric pillars, in the form of a ruin.

We at length quitted the beautiful though fearful summit of the cliff. A quarry has been made close to it. The freshly-hewn stone lying around formed a strange, but by no means agreeable, contrast to the other rocks which were overgrown with lichens, moss, &c. It will be a long time ere Mother Nature, and her handmaid, Art, can again veil these bare rocks from sight, and restore the interrupted harmony.

At the time of my visit to the Crimea, only the underground portion and the parterre of the palace were completed, and the first story was just being commenced. The building forms a quadrangle, each side exactly facing one of the cardinal points; but it consequently sins against all the rules of æsthetics, as it is an unnatural position to the chain of mountains, and the sea, which runs parallel with them. The underground rooms, &c., were all vaulted, but appeared to me rather small. In this portion, greenstone has been used, while the upper part will be built of the pale-red Jura limestone, and the brilliantly white stone from Inkermann. No opinion could yet be formed of the *tout ensemble*. It seemed to me, though, as if the decorations, as regarded size, were not at all proportioned to the elevation..

The immediate proximity of the palace is rather swampy; but this abundance of water was well adapted for the formation of a basin, filled with all sorts of aquatic plants. Splendid

white willows and tall alders formed a pleasing grove, which was overgrown with wild vines and ivy. The former wore a very agreeable aspect, and reminded me forcibly of the virgin forests of ancient Colchis, where they clamber in unrestricted freedom to the tops of the highest trees, and frequently form natural garlands from one branch to the other. The ivy was in most luxuriant growth; but its leaves did not possess that beautiful indented form, which pleases us so much at home.

Hence we turned our steps towards the sea, and, in the first instance, to the two immense blocks of stone which stood like guardians on the sea-shore. A winding path led beneath the leafy shelter of large walnut trees, and afterwards through a thickly-growing wood to a waterfall. The dark foliage, and the solemn silence of nature, only interrupted by the splashing of the water in the stream, as well as the more remote sound of the rippling waves, had a most peculiar effect on the mind.

By a zig-zag path we at last reached an open spot, guarded in front by huge masses of rock rising out of the sea. As it was perfectly protected from the wind, Herr Rögner had formed here a species of tropical garden. The beautiful banana tree (*Musa Paradisiaca*, L.) grow here in the most extraordinary luxuriance; its large glistening leaves were very slightly dentated, and hung down most gracefully. It was just beginning to bud. Not far from here, a large patch of ground was planted with batatas (*Batatas edulis*, Choisy). This interesting plant belongs to the family of the convolvulus, and is substituted, in all tropical countries, for our potato, which will not grow there. It is by origin a native of the East Indies; and from its great utility has been propagated through all the tropical countries, Herr Rögner gave us a dish of the tubers at dinner; they have a sweeter taste than our potatoes, and bear, consequently, a closer resemblance to the tubers of the Jerusalem artichoke (*Helianthus tuberosus*, L.), which is cultivated in some portions of Germany, under the name of the tuberous-rooted sunflower, but has never given such general satisfaction as the potato. The Jerusalem artichoke is also an American plant, and is a native of Brazil.

With very great labour, a path has been cut in one of the blocks of stone by the sea-side, and its summit can be easily reached. A violent wind at this moment was lashing the previously so calm sea, and the white foam scudded over the

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agitated surface; the waves broke furiously against the solid rock, and were beaten back in the shape of foam and spray. What a contrast was presented when I turned my back on the sea, and looked up to the mountains. Close at my feet, the open spot partly cultivated, and partly converted into a meadow, then the works of the imperial chateau, and lastly, a dense body of foliage, displaying every hue of green, from which a few rocks peeped out, until the beetling cliffs filled up the scene, rising several thousand feet, and bearing on their summits the gloomy; melancholy pines!

From this spot, Herr Rögner led us through various plantations and grounds to the park, about three miles in circumference, in which there is no dense growth of wood, but merely isolated oaks. Roebucks and stags had been caught in Russia, and brought here to enjoy their liberty within certain bounds. They have increased so rapidly, that in every direction herds of roebucks can be seen, or stags in groups of two or three. As they are regularly fed both summer and winter, they have gradually grown so tame, that they seek the company of man, rather than fly from it. In the centre of the park there is a piece of water, not particularly ornamental. My kind guide drew my attention to the rapid growth of the silver willows with pendulous branches. In less than ten years their trunks had attained a height of forty feet, and a crown from twenty to twenty-five feet in periphery.

On leaving the park, we continued our walk by another path, and at last reached the second precipice, situated on one side of the gardener's house, and which bears on its summit the Doric pillars. It does not rise to such a height as that we had first visited. Its summit was covered with the masses of rock, like the former; nor do any shrubs grow upon it. The Doric pillars look grander at a distance than when near; for the surrounding magnificent scenery renders them insignificant. Any one not accustomed to climbing precipices will do well to remain below, and avoid a danger to which any giddiness might easily expose him.

Beyond this precipice a thick wood commences, and stretches as far as the high road. After an uninterrupted walk of six hours' duration, we at length reached the house, utterly exhausted, but gradually recovered, through our host's good things. For dessert, we had grapes of all the best varieties grown here, which, without exception, possessed a sweet taste

and delicate aroma; but, at the same time, the rough skin I have already mentioned.

On the next day, Herr Rögner conducted us to that portion of the imperial estate which lies to the north of the high road, between it and the mountain chain, and contains the most majestic rocky scenery. Here art has effected little or nothing, though much might be done. The indigenous shrubs, the two varieties of hornbeam, the mountain ash, the whitethorn, the hazel, and other shrubs, had been left in their natural state. Only a narrow path had been cut through them, that the summit of the next cliff might be reached with less difficulty. We then passed through the wood, and soon found ourselves in a fine broad plain, which appeared to be covered with taller, but not so densely-growing, shrubs, and a few varieties of trees; among them the rowanash, oak, and maple. The summit of the cliff was covered with Crimean pines. This frequently-mentioned tree most resembles the maritime pine, and some persons suppose it to be only a bastard variety of it; but it has larger leaves, and is distinguished by its horizontal, fan-shaped branches, which grow gradually smaller towards the top, and so give the tree a pyramidal shape. This tree attains no considerable height or size. I saw no specimens which were more than thirty feet in height, or more than a foot in diameter.

We went round the conical summit, which was covered with limestone boulders, and reached a pleasant woodland lawn, which, with its fresh, uniform verdure, was the largest I had seen for a long while. A Tatar had rendered a portion arable, and planted potatoes in it, but some of his countrymen had been beforehand with him, and robbed him of his crop. The unfortunate man rightly complained that he had been deprived of his winter's bread. We forced our way through a thick wood, and again reached the verge of the precipice at a spot where it was not quite perpendicular. Here we seated ourselves on a stone, and, at a height of 1500 feet above the sea, gazed upon the numerous villas and farmhouses which lay in the centre of the most beautiful scenery all around us.

In a rocky chasm, a beautiful arbutus had stood for several centuries. It had resisted all the assaults of wind and weather for a long, long time, until at last a cruel hand robbed it of its finest branches. So long as the southern coast had been the favourite residence of the Russian nobility, this arbutus had been the object of their admiration: all strangers

were brought to this spot to see this magnificent specimen, as well as the fine view. The injury done the tree was the more lamentable, as it was evidently the result of malice; for the branches lay close to the trunk. It was, undoubtedly, one of the fanatic Tatars, who still hate the Christians, the foes of Islamism, in their hearts, and yet love the spot on which they were born so dearly that they will not emigrate. The prince ordered that the lopped branches should be left at the foot of the tree, that they might bear testimony to the size of the arbutus; but even in its injured condition, this interesting tree attracted my entire attention. The arbutus belongs to those evergreen bushes which do not form undergrowth, but grow on a rocky soil. It is very rare to find many of them together in one spot. Such an instance, however, is found in the lower part of the valley of the Tchoruk, and is most peculiar. Its bright-red bark, which comes off in strips, contrasts with the glistening vivid green of its leaves, and the white depending clusters of blossoms, or the fruit, which bears a great resemblance to the strawberry in colour and shape.

This specimen was three feet in diameter at a distance of twelve inches from the ground, but was only twenty-four feet in height, owing to the injury it had received. Near it grew several other arbutuses, which probably owed their birth to the large tree. The tall, leafless juniper, of which I have already spoken, was frequently to be seen here. Both the arbutus and the juniper, however, did not find the nourishment they required in this rocky soil; some of the roots, consequently, from one and a half to two inches in diameter, grew down the cliff until they reached some cavity in which they found spaces and nourishment. In some instances, other radicles were sent forth from these, to seek support in lower chasms for the parent tree. In this manner, roots had descended for a distance of forty to fifty feet.

We at last quitted our elevation, and turned towards the fourth cliff, which lies higher up toward the west. It does not belong to the empress's estate, but forms part of little Oreanda, formerly the property of General von Witte, from whom it passed to Leon Naritschkin, and thence to the Grand Duchess Helena. Little Oreanda bears considerable resemblance to Great Oreanda, as regards situation, but is very much neglected. In the fourth precipice, which is separated from the former by a ravine about a hundred feet in breadth, there

is a cave, of no great size, which, seen in the distance, gives a peculiar charm to the landscape. A path cut through the thicket leads to it. Unfortunately, no care has been devoted to the prospect. I may remark, that an immensity might be done here, where nature offers everything that can be desired. The cliff differs from the others through being perfectly perpendicular, without the slightest interruption.

And yet, two ivy plants have succeeded in climbing up it, and covered a portion of its perfectly naked surface with their vivid green leaves, which form an extraordinary contrast to the dirty yellowish-white of the rock. One of the ivy plants is one and a half feet in thickness, just above the earth; it has, therefore, been growing here for several hundred years. The other specimen was much smaller, but much more interesting to me, as the actual stem had been wantonly cut away: but, for all that, the upper part was still living, and sent forth new branches in every direction, which adhered tightly to the rock by their suckers.

Further to the west, at the foot of the cliff, there is another hollow, which is reached by a rustic flight of steps. It does but little to increase the beauty of the scenery, as it is filled up with dense bushes, and there is no prospect. A great deal of good might be done by thinning the trees. On the top of the cliff stands a gilt cross, which is visible for a long distance. It is in the centre of the insignificant ruins of an old fortress, called Megabi, which owed its erection to the Genoese, or probably to the Greeks.

From this place we went to another part of Little Oreanda, lying to the north of the high road. We found much that pleased us, but does not require any detailed description, as I have dwelt so fully on the finer scenery. Besides, much less care has been devoted to this portion than to the lower, and a stranger is very rarely taken to see it. For myself, however, it possessed great value, as only the indigenous trees grew there without any admixture of foreign plants or shrubs. Above all, I noticed fine specimens of the downy-leaved oak (*Quercus pubescens*, Willd.), a variety only belonging to the eastern portion of Europe. Those specimens we are acquainted with under this name from Italy and the West, and especially from the Pyrenees, are probably only varieties of the pedunculate oak, and belong to the *Quercus Pyrenaica*, Willd., and *Tozza*, Lam. The Crimean *Q. pubescens* is a small tree, with a stem from four to six feet in height. This generally

separates into from four to eight main branches, which diverge in a horizontal direction. The stem cannot be afterwards followed up to the very broad crown, which is frequently from forty to fifty feet in diameter. I saw no specimens above fifty feet in height.

On the third day we proposed to explore the romantic valley of Yalta; but such a violent wind, which at times grew into a hurricane, had set in, that we were not actually able to keep on our horses, and were forced to dismount. The wind was accompanied by very violent showers, which drenched us in a short time. We had no choice left us but to take shelter in the inn at Yalta, and await a more favourable season. We were told that storms were very frequent about the equinox. Many ships perished at that season. Any one who was not compelled to go to sea remained quietly at home, even though the waves might be small, and the surface of the sea unrippled: for the more quiet the sea appeared, the more did a storm impend. The winds here are all the worse from their hardly ever blowing from the same quarter. Not merely do they suddenly veer round and blow from the opposite quarter, but there have been repeated instances of two winds blowing simultaneously in each other's teeth. The most destruction is caused when they come in collision.

At any rate, the precipitous cliffs exercise a great influence upon the fickleness of the wind. I was told that ships and boats, unless they were riding safely at anchor, were blown right out of the bay of Yalta into the open sea. Probably—for a northerly wind cannot be the cause, owing to the neighbouring mountains, on an average 4000 feet in height—a west wind gets caught in the bay of Yalta, and suddenly rushes out again with such violence that it carries away everything that dares to check its course. There have been instances in which men walking near the sea, especially in cloaks, have been blown into the water, and only saved from drowning by the greatest exertions.

In the spring prior to my visit, a carriage, with horses, coachman, and a gentleman inside, was blown into the sea. The latter was saved by means of a rope that was thrown him. The coachman and horses, however, were drowned, and nothing was ever heard again of the carriage. In the previous year a transport ship had attempted to sail from Sebastopol to Nicolayeff; it was caught in a storm, and driven in a very short time to the coast of Asia Minor. It was for-

tunately uninjured, but it required eight days to reach its destination from Trebisond. A few years back, the proprietor of an estate situated close to the sea set off in the finest possible weather in a little yacht to visit a friend, who resided some distance off. A storm suddenly burst, and the boat was the sport of the waves for three long days. At the expiration of that period the gentleman succeeded in regaining the south coast, though in a state of terrible exhaustion.

Between Great Oreanda and Yalta are situated the beautiful grounds of Count Pototzky, Russian ambassador at Naples, and extend nearly from the sea-coast to the foot of the cliffs. The estate bears the name of Livadia, from a town that formerly stood here, about the ruins of which much was told me, though I did not see them, and a more suitable appellation could not have been selected. I went there on several occasions during my stay at Oreanda, by invitation of the hospitable count, and felt each time charmed with the taste and refinement which I noticed here more than in any other part of the southern coast. It is evident that the proprietor spends a great portion of his time on the estate, and pays great attention to beautifying it. The amiable Count frequently quits Naples for months, a city which can be compared with Constantinople and Rio Janeiro for its beautiful situation, and lives here, far from the turmoil of life, in rural and domestic retirement.

As is the case in all the Crimean châteaux, the goddess of Hospitality has erected her temple at Livadia, in which every stranger meets with the kindest reception. Even in the absence of the owner, the inspector has orders to satisfy all the wants and wishes of the guests, and takes a pleasure in acting up to them.

If the neighbourhood of Oreanda is more pleasing than that of Alupka, this is still more the case at Livadia. It is one great improvement for the estate that it has many level spots; but, on the other hand, the rocks are a long distance off. Livadia, consequently, has more the aspect of an English park, in which pleasant lawns alternate with clumps of trees and thickets. There is generally a greater degree of harmony, as the various plantations do not attract the eye by any startling contrasts. Through the whole of the count's estate the savage beauty of the towering cliffs is wanting; but, on the other hand, there is an extreme charm in the groves and lawns, and even in the buildings. The former

gardener, Taschner, who laid out the greater part of the park, was an artist in the fullest sense of the term.

The château lies close to the high road, on a slightly curved natural plain, and is built in the Italian style. It consists of two buildings, which stand at a right angle to each other, and is only one story in height. The lower rooms are generally occupied by the family. Here, too, are the drawing and dining-rooms, as well as libraries and studies. The upper rooms are magnificently furnished, and are only used when numerous guests arrive. Here I saw an oil painting by Raffaelle, a Virgin Mary with the infant Christ on her lap.

There is a very fine view from the balcony, as well as from the terrace on the roof. From the former I saw Yalta, whose bay is bounded to the east by the promontory of St. Daniel. The valley of Yalta, with its peculiarly rocky scenery, on the top of which Tauric pines grew, appeared to me excessively beautiful. Upon a promontory was the church of Massandra, reminding me of the temples on the Grecian coast. Behind the promontory I perceived the pinnacles of the conical Bear Mountain (Aiu-dagh), which seemed to rise far out to sea. Beyond them the coast range extended on the grey horizon as far as Sudak, where another promontory juts out, and separates the bay from another, in whose curve Theodosia, of which I have already given a description, is situated. In truth, the prospect was magnificent; on one side the boundless sea, and on the other the mountains frowning in the rear of the park.

Close to the château were pleasant lawns, which I had missed so greatly at Alupka, and which would have softened the savage nature of the scenery there. They do not, however, deserve this name, if lawns must be covered with grass. Herr Marko told me that many sorts of grass, especially the English couch grass, would not flourish here. They were consequently obliged to sow other grasses among it. For this purpose they principally used the red clover (*Trifolium incarnatum*, L.). Lucerne clover had also been employed, but with less success. In the centre of the lawns were flower-beds, containing the blue sage, red fuchsias, but above all the pelargonias with their scarlet blossoms. A quantity of creeping plants had been trained over the house. They had already grown so thickly, that not the slightest portion of the white wall could be distinguished.

The groups of taxodias, arbores vitæ, fuchsias, magnolias,

oleanders, &c., were beautifully arranged. But the plantations of evergreen, hawthorn, and phillyreas did not harmonise with the flower-beds, as their spreading branches, though always covered with leaves, even in winter, give more or less of an angular look, and gave the whole a degree of formality. In hedgerows and enclosures, where the scissors must be called into play, they are in their proper place; they are also suited for gardens in the old French style, but not at all for English gardens, which owe their charm to undulating easy forms and natural outlines.

The monthly roses, which were now in full flower, increased the pleasant effect. Just as the green trees displayed the most varying shades, so the roses formed a transition from dazzling white to the brightest scarlet. The East Indian trailing rose (*Rosa involucrata*, Roxb.) had been employed to cover the very ground with flowers. By crossing, several very pretty varieties had been obtained, remarkable for handsome and large flowers.

I shall say no more of the English plantations, as it would be a twice-told tale. The native oak (*Quercus pubescens*, Willd.), of which one can grow tired eventually, on the south coast, had been entirely extirpated. The real weeping willow (*Salix Babylonica*, L.) deserves mention, as it rose out of the dense foliage above the larger groups, and gave a picturesque aspect to the scene, with its gracefully pendent branches. I have never seen this tree, which is of great value for the landscape gardener, so excellently employed as in the park of Count Pototzky. Unfortunately, it does not prosper among us, and is killed by a slight degree of frost. The pendulous willow (*Salix alba*, β. *pendula* and *nigra*, Wahleub.) is but a poor substitute.

I also missed here grottoes, summer-houses, and benches. It seemed to me almost as if these, they fancied, were not requisite in a park which is used by only few persons. But even if the pedestrian does not require them, still seats give a relief to the eye, and remind the solitary wanderer, who is perhaps lost in his day-dreams, of the present. I should have wished also for more paths along the sea-shore, and for greater attention to have been devoted to the lower portion of the park. Further, I missed those openings which allowed a view of the sea. The grand, boundless ocean ought to be taken advantage of in such a manner that the park should gain by its proximity. How beautiful in every way

would a pavilion on the sea-shore have looked. I took the liberty of calling the owner's attention to this, and I was delighted that he also recognised the want; but everything could not be done at once, and he might do it the next year, if possible.

The count has contrived to compensate for the want of buildings, by giving the houses of the servants and the domestic offices a pleasant shape, which harmonizes with the scene; but, unfortunately, they are too close together. Thus, for instance, the wash-house, &c., which generally are very ugly objects, reminded me of the airy buildings of the East. The hospital, too, which the count has built for his people, agrees exceedingly with the surrounding scenery.

We devoted a lovely afternoon to an inspection of Little Oreanda, and the whole coast as far as the promontory of St. Theodore. We formed the acquaintance of two young artists, who were living here for the sake of sketching, and had been allowed to take up their residence at Little Oreanda. One of them had spent the preceding summer in the Altaï mountains.

In the company of these two gentlemen, we visited Little Oreanda, and, in the first instance, the lower portion, lying to the south of the high road. Art has effected very little here. With but few exceptions, the primeval vegetation existed here; and only at a few spots had foreign trees and ornamental shrubs been planted. The native trees were in greater luxuriance than any I had hitherto seen; the maple, the pubescent oak, and, in a few spots, the Italian oak and the Roman ash had attained a respectable height. The scenery, therefore, more resembled a forest than any I had seen on the south coast. The *terrain* was more rocky than in Great Oreanda, and reminded me forcibly of Alupka. Although boulders lay around in every direction, and a stony soil was visible here and there, both were formed of limestone; greenstone had nowhere come to the surface, and I did not even see any clay-slate. The numerous convulsions, however, had rendered the soil porous, and probably produced a quantity of cavities in the interior, so that rain and snow-water could penetrate, and eventually burst forth in the shape of springs at other places. The boulders were overgrown with a dense mass of moss, grass, or herbs, or were, at least, more or less dissolved. The roads which had been laid out did not have

the same attention paid them as on the other estates; nor did they also run past the most interesting spots.

The nearer we drew to the promontory, the extremity of which forms Cape Aithodor, the less fertile did the soil become, and the indigenous bushes, especially the oak and the Eastern hawthorn, were very scrubby. Gradually, too, the juniper with bright-red berries (*Juniperus rufescens*, L. R.) made its appearance, which for so long a time was confounded with the juniper cedar (*Juniper oxycedrus*, L.). At the commencement of our walk, this bush was a very fine object, and in size like that of the cypress, although, instead of fleshy scales, it bore needle-shaped leaves. Like the tall juniper, this variety also likes rocks, and above all a soil covered with triturated rock. Where it is very sterile, and a strong wind blows, it lies on the ground like our savin tree, and its branches grow upwards. This variety was the more interesting to me, as I saw on it a small parasitical mistletoe, as is the case with the juniper cedar in the south of France. This parasitical plant is still more valuable, as it is to be distinguished from our mistletoe by its geniculated stem; and consequently belongs to a group which is a native of the East Indies. Marshal von Bieberstein, the industrious author of the "Tauro-Caucasian Flora," correctly supposed that this parasite was the type of a new genus, and consequently christened it *Arceuthobium*—that is, the juniper parasite, and the family, the *Arceuthobium Oxycedri*.

When we reached the verge of the promontory which separates the bay of Alupka from that of Yalta, the prospect entirely changed with the vegetation. The same wildly-romantic and grotesque scenery which I have already fully described, lay once again before us. From this point, close to the sea, it appeared far more magnificent than when I gave the description, as I stood on the midst of the rock. More especially, the perpendicular cliff close behind Prince Woronzoff's estate formed a most imposing object; not a bush, not a plant had succeeded in taking root on the barren rock. Even at the summit, where it appeared to be rent asunder, and presented to the eye a number of bare pinnacles, it was naked and desolate.

At last we reached the highest spot on the promontory, where the Russian government has erected a lighthouse for the protection of vessels sailing past. This was the first

opportunity I had for examining an establishment of this sort. The tower consisted of two stories, and a winding flight of steps led to the uppermost terrace, on which were six lamps. Their light was reflected by metal mirrors, and could be seen from an immense distance.

The view from this elevation was one of the most wonderful I had ever gazed upon. In truth, I could not decide whether I should turn towards the heaving sea, whose waves broke furiously against the hard rock of the promontory, and were converted into a cloud of mist, and the rocky coast which stretched out on either side; or whether I should turn to the mainland, with its pinnacled cliffs, which formed the background of the landscape; the declivity gently sloping from its base, with its wildly-scattered boulders; and the pleasing or romantic plantations, which mortal hand had produced. One prospect was as majestic as the other; one with the image of the infinite; the other, on the contrary, with that of the finite, to which everything terrestrial must yield.

In the vicinity of the lighthouse were the remains of an old wall and a few fragments of pillars. Before Islamism had extended over this fine country, there was a Greek monastery at this spot, whose monks, all honour to them! were engaged in receiving the unfortunate sailors whose vessels were cast on their rocks and shattered, in their narrow cells, and nursing them until they could decide on their future course of life. We also found the traces of a subterraneous passage, which terminated at the spot where the lighthouse now stands. Probably a tower was erected here in the early ages for the same purpose, and on the same spot.

At length we started homewards, and selected a narrow and, at times, dangerous path, which ran close by the sea. A number of beautiful bits of scenery presented themselves once more; for the cliffs ran as far as Oreanda, and displayed the most varying forms. I have already expressed my opinion, that it is a mistake in the majority of parks not to have paid any, or at least very slight, attention to the vicinity of the sea-coast. Here, where I had better opportunities for appreciating its beauties, I only felt the more sorry.

Towards evening, we reached our rural abode. I am most deeply indebted to Herr Rögner, not only because he took every possible trouble to make me acquainted with all the beauties of the southern coast, and for this purpose devoted days to me, but even imparted to me all the experience he had

obtained. With his consent, I therefore, in a later chapter, give the results of his valuable observations; and I am convinced that they offer much that is interesting even to the uninitiated, and will attract the entire attention of my readers. Herr Rögner had also made a collection of Crimean plants, which he not only very kindly permitted me to inspect, but allowed me, for the behoof of science, to take specimens of all he possessed. I have already published a portion of them in my "Oriental Flora," of which six parts have appeared.

CHAPTER IX.

JOURNEY TO ODESSA.

Departure — Aidanil — The Bear mountain — Yurssuff — Soil — The eastern and western divisions of the south coast — Dialects — Alushta—The iron gate—Tauschan Bazar—The Tent Mountain (Tchatir-dagh) — Salgir — Orchards — Simpheropol—Passport incidents—Monotony of the plain—Forays of the Tatars—Perekop—Aleshki — Saporogians—Cherson—Nikolayeff—Professor Knorre—The Admiralty—Odessa.

I REALLY felt quite grieved when I was compelled to quit Oreanda, a place I had learned to like, and where I had made such a friend in Herr Rögner. As it was uncertain whether the communication between the southern coast and Odessa would be re-established this autumn, Herr von Smitten, the two merchants from Riga, and myself, decided on making a journey by land. Although my friends were much annoyed at this, it afforded me great pleasure that I could examine the south Russian steppes in autumn, after seeing them already in summer and winter. Besides, although I was acquainted with the northern coast of the Black Sea, I had never yet had an opportunity of traversing the Crimean plains from Simpheropol to Perekop—that is, as far as the isthmus which connects it with the continent. The distance from Yalta to Odessa by this land route is no less than 480 versts.

On the 8th October, we four entered two post-wagons, and started on the high road to Simpheropol, the capital of the Tauric government. I had another opportunity of examining a portion of the south coast, where art had done but little. We drove from Yalta through Massandra and Maharatch, close to the border of the clay-slate and sandstone region to Aidanil. This is the first station, distant 10½ versts from Yalta, situated on a promontory which runs down to the sea, the extremity of a ridge which diverges from the principal mountain chain. The name itself, like all those commencing with Ai—that is, sacred—is derived from the Greek. Ai is said to be derived from ἁγιός, which in ancient Greek has also

the same meaning. The Byzantine Greeks were accustomed to give the name of one of their saints to promontories, although no church or sacred building may be built on them. Thus we have seen the name of Aithodor—that is, St. Theodore—given to the promontory which bounds the bay of Yalta on the west. Aidaniil—i. e., St. Daniel—is the name of the promontory which bounds it to the east.

On arriving at this spot, a very different prospect opened before us. In the rear of Aidanil the land again recedes, and the sea forms a bay, nearly equal in size to that of Yalta, but of an entirely different description. It is bounded on the east by a promontory, forming a conical mass of rocks, about 1000 feet in height, which is only slightly connected with the cliffs. Close by it, several perfectly isolated rocks rise out of the water. The massive rock round which the road winds has been compared to a bear going down to the sea with its cubs to quench its thirst, and hence has obtained the name of Aiu-dagh—that is, the Bear Mountain. In a geological view it is extremely important, as it forms the centre of one of the most considerable eruptions on the whole of the south coast. After the strata, which had till then formed the surface, burst, the masses held in readiness in the interior were expelled in the shape of greenstone, and have remained for ages unchanged. Wind and weather have certainly tried their influence during this long period, but the hard stone has only so far been superficially altered, that its primitive grey-green and white-spotted colour has been converted into a dusky hue.

While the Bear Mountain forms a mass, more or less massive, all around can be noticed the destruction which its appearance entailed. Round its base is a belt of dusky as well as greyish-green and white-spotted stone, which appears to gradually merge into porphyry and melaphyry. At a further distance lie larger and smaller boulders, some formed of clay-slate, others of limestone. The sandstone I recently mentioned continues here, and for some distance further, but its colour is changed from red to a grey-green. Here and there, too, it merges into conglomerate, without doubt in consequence of the eruptions to which I have alluded.

Although the views had previously been so varied and changing, still there was always something new offered to our sight. Highly romantic was the situation of the old Tatar village, Yurssuff. Something of this nature is wanted in the

otherwise so lovely bay of Yalta. The houses lying in terraces above each other, and the majestic walnut-trees which shade them, form a landscape meriting the attention of an artist. The houses among us, with their red roofs sloping off at a right angle, are not nearly so picturesque as the far more modest abodes of the Tatars. Still more interesting for the artist are the villages with thatched roofs, especially when the latter are a few years old. I really feel sorry that the thatched roofs, with their frequently so luxuriant vegetation of mosses and grasses, are gradually disappearing. I would gladly have stopped a little while at Yurssuff, had not my companions been in such haste: we therefore drove round the Bear Mountain, and soon reached Biyuk-Lambut—i.e., large Lambut—seventeen versts distant from Aidanil. From this side, the conical mass of rock looked a pleasanter object than from the other: a dense wood of oak trees covered the back of the rock, with the exception of the somewhat steeper slopes.

At the Aiu-dagh, the vegetation of the southern coast assumes another character. Above the bays of Yalta and Alukpa the bushes have rather a scrubby appearance; the branches generally stand out at an angle of more than 45°, and extend their ramifications in the same manner. Here, on the contrary, though the bush-shape is still prominent, the oaks and beeches assume more of a tree-like character, and the stems cannot generally be followed to the top. The branches, further, have more of a virgated form—that is, they shoot out at an angle of 45° or less, and are longer than usual in proportion to their breadth. The downy-leaved oak (*Quercus pubescens*, Willd.), which had been the principal shrub hitherto, with the Eastern hawthorn, gradually disappears to the east of the Aiu-dagh, and its place is occupied by the winter oak (*Quercus sessiflora*, Sm., *Q. robur*, Willd.), which, though resembling it, is always larger. It cannot be denied that the foliage of the latter, through its vivid and dark green, is a more pleasant object than that of the other tree, with its pale green hue.

After passing the Aiu-dagh, another bay opens before the traveller, which exceeds any of those he has passed in size. It is again divided into several smaller inlets. To the east it is bounded by a promontory, jutting out to a great distance, called Meganup, on which the recently-rebuilt but very ancient commercial town of Sudak is situated. There are some things in the world which defy comprehension. At one time it is

chance which causes a favourably-situated neighbourhood, provided with all appliances, to be passed over; at another, it is man who does not notice it. The whole extent of country from Aiu-dagh to the promontory of Sudak presents so many beauties, at least in the first half, that I cannot understand why no rich Russians have settled here. Nearly everything found in the bays of Yalta and Alupka is met with here, and, in addition, it possesses much in which they are deficient. At various spots, old Vulcan had made a terrible commotion. The rocks which have erupted are in some parts massive, in others form boulders. It so far differs from that above the bay of Alupka, by having been more exposed to the action of fire, and hence obtained a porphyritic structure. We also find here a mass of broken rocks, composed of strata, and forming a species of pudding-stone. I saw pieces in which it was difficult to distinguish felspar and other crystals in the shapeless mass, and in these a transition to the basaltic rock could be traced. The clay-slate which, to the east of Yalta, is seen in conjunction with sandstone on the surface of the earth, as well as the lime which appears, principally in the form of strata, to the west of Yalta, are met with together here, though the first of the two is predominant.

Finally, the *terrain* to the east of Aiu-dagh differs materially from that which we noticed on the other side. In addition to the circumstance that more frequent and violent irruptions of the internal framework of the earth occurred here, the ridge of the mountain is broken through at various places; hence many more valleys and ravines have been formed, than appears to be the case to the west of Aiu-dagh, where there is only one, namely, the valley of Yalta. At one place, indeed, a portion nearly three miles in diameter has been perfectly dislocated from the earth's surface, and was uplifted by the subterraneous stone a thousand feet higher than the present ridge. There it still lies, and forms at the present day the highest mountain in the Crimea, the Tchatir-dagh, or Tent Mountain. A surrounding wall of rock, as is so frequently found in the Caucasus, is not found here. The subterraneous rock can be clearly distinguished on three sides. The Tchatir-dagh forms at the summit a rather level plateau, which falls off precipitously on all sides. A ravine surrounds the base of the mountain, running from north to south.

The most important eruption took place in the vicinity of the village of Alushta, or to the south of Tchatir-dagh,

and in the same direction. From here eastwards the subterraneous effect was much less violent. No more eruptions of Plutonic rock are visible, the clay-slate gradually disappears, and its place is taken by Jura limestone. The same rock henceforth covers the summit of the mountain, as well as the narrow coast-ridge. I did not travel the whole distance from Alushta to Theodosia, but from all I heard about it, and what the industrious Dubois de Montpereux, as well as Prince Anatole Demidoff reported, no eruptions took place beyond six miles to the east of Alushta. The mountains, consequently, no longer represent a fissured ridge, but form an elevation tolerably regular on either side. This is very naturally explained by the circumstance that the base is no longer composed of a rock, originally lying deeper, but of the same limestone as the ridge itself. The height of the eastern portion of the Crimean south coast is also, on the average, less, and in the centre hardly reaches two thousand feet. The whole mountain range is divided into two natural portions, by the above-mentioned separation and the uplifting of the Tchatir-dagh. From Alushta the road runs through the valley formed by it, and close past the Tchatir-dagh to Simpheropol. Its highest point is about two thousand five hundred feet above the level of the Black Sea.

The Tatars also distinguish this natural division of the coast-range into east and west. In former times it possessed a far higher importance. I was told that walls were once built on the Bear Mountain, which shut up the defile; at the present time not a trace of them is to be found. Whenever a new tribe appeared on the plains of the northern Caucasus, and in consequence of their innate love of wandering, or through the ambition of the chieftains, pressed forward, and finally dispersed over the northern plains of the Tauric peninsula, a portion of the natives fled to the less accessible western portion of the coast-range, while the eastern half was generally speedily occupied by the conquerors. A portion of the inhabitants sought refuge in their ships, and founded a new fatherland on the opposite shores of the Black Sea. The nation which settled on the steppe had generally no inclination to follow the fugitives into their inaccessible valleys, and preferred to make a treaty with them. Only very rarely did they attempt to extend their dominion as far as the western coast. The only passable road at that time ran to the coast of the Black Sea, exactly where the main

road from Simpheropol to Alushta now runs. This road the Scythis indubitably selected, in order to subjugate the Crimorians who had fled to the mountains. On the coast itself the trade-loving Greeks of Asia Minor, at a later date, founded colonies, and transplanted the Greek element to this distant neighbourhood, about which they narrated the most fearful tales, to prevent others of their countrymen from undertaking similar designs. Among other stories, they stated that Helios never appeared there in his chariot of the sun, and purple gloom uninterruptedly brooded over the earth. "Cimmerian darkness" was proverbial among the Greeks.

It is not my purpose to mention all the various nations that entered the Crimea at a later date, and especially since the commencement of our chronology, and then frequently disappeared again without leaving a trace. I will only mention one of the latest immigrations. Under the Byzantine Emperors many Greeks appear to have again settled on the southern coast. Eventually, however, when the Genoese had gradually obtained an influence in the eastern portion, and subjugated one town after the other, the former retired, with the Gothic survivors, to the less accessible west, where they lived generally unassailed, until the recognition of the Turkish supremacy by the Tatar khan. Their castles and forts were eventually taken by the Turks; the whole population were compelled to adopt the Islamite belief, or were put to the sword. After this period, the Mahommedan remnants of the former population appear to have partially regained their independence in their inaccessible valleys, and to have been more attached to the Turks than to the Tatars. With the creed they had also adopted the language of the Osmanli. This is clearly seen from the names of the villages, rivers, and mountains, which are not derived from the Tataric dialect, but from the language spoken at Constantinople. It is very different with the inhabitants of the eastern portion, who were always in close connexion with the Tatars of the northern plains, and in some cases became fused with them. In the course of time they also assumed their dialect. This differs, however, through its harshness, very materially from that which is spoken in Constantinople, and has lately attained the dignity of an epistolary language; but, on the other hand, agrees more with that which the Noghays on the Kuban, and which the Kumyks and Truchmenes in the west of the Caspian Sea employ.

I will attempt to prove this statement by a few instances. In the Turkish written language, the names of running waters are generally expressed by "Ssu,"—i.e., water, and some adjective describing it more particularly. This is also the case in the west of the south coast. Thus, a small stream is called "Souk-ssu"—i.e., cold water; another, "Kara-ssu," that is, black or sluggishly-flowing water. On the eastern part, however, the word "Usen" is employed for the purpose, which is found again in the extreme east of the Caucasus, and, if I am not mistaken, beyond the Caspian Sea as well. For "large," the Turks of Constantinople use the word "Biyuk;" the Tatars on the north-east of the Caucasus, and some on the eastern half of the south coast, employ the word "Ulu." A village the latter call "Aul" (aōul); the former on the contrary, "Köi," or, in the vicinity of Constantinople, "Tjoi."

The short distance from Great Lambat to Alushta, which is only thirteen and a half versts, we speedily accomplished. Alushta in situation bears some resemblance to Yalta; but it would, in every respect, be better adapted for an *entrepôt* for the south coast than Yalta, were not the largest estates, as Alupka, Oreanda, and Livadia, at too great a distance from it. Like Yalta, Alushta is situated on a plain, which is raised only a few feet above the level of the sea, but is of very large circumference. The ravine to which I have so repeatedly referred, is not so narrow as that at Yalta, and could, consequently, be easily employed for the formation of a convenient high road, which in the former case is a matter of impossibility.

The old Greeks did not recognise the value of the situation of Alushta. Probably, too, the slight degree of cultivation on the whole of the coast induced them to plant their colonies at the extremities of the mountain chain, whence they could more easily maintain friendly relations with the denizens of the plain. It first attracted the notice of the Byzantines, and Justinian built the fortress of Alushten. The place must at one time have been of considerable importance, as traces of all sorts of walls can be found extending to a rather great distance. Tatars afterwards settled on the same spot, and helped in the destruction of the ruins. Three towers still remain in a very respectable state of preservation, but, strange to say, of entirely different forms. One is round, the other quadrangular, and the third is even sexagonal; all these,

however, are remarkable for the thickness of their walls, which are more than six feet through.

Alushta and its neighbourhood are remarkably pleasing. The houses are not built with their backs against a hill, as is generally the case in Tatar villages, and, consequently, are not partially imbedded in the ground, but stand self-supporting, and forming narrow, winding streets. The inhabitants are remarkable for industry, and employ their time chiefly in the cultivation of the vine and fruit. The immediately surrounding country appeared to be one large garden, whose green foliage afforded a pleasant contrast to the sterile rocky scene in the distance. The wine produced here is said to be excellent, though it does not have such attention devoted to it as on the imperial estate, and is generally sold by the name of "grave." An idea can be formed of the extent and value of the vineyards here, when I state that nearly half a million grape-vines produce the fruit for the wine. It did not appear to be the custom here, as yet, to export the better sorts and keep the worse for home consumption, for in the inn, which though externally imposing was internally very moderate, we got a better wine for our money than any we had hitherto drank.

The sun was fast sinking into its ocean bed when we again entered our little post-wagon, and drove up the ravine along the road, which is the result of Major Frömbder's talent and skill, to cross the mountain ridge, and bid an eternal adieu to the lovely southern coast. The road, which from Yalta to the Bear Mountain ran north-east, and thence almost due north, now turned to the north-north-west, for in that quarter lay Simpheropol.

The higher we rose the cooler the wind became. We soon put on our cloaks, not to be attacked by the so-called Crimean fever, a species of intermittent, from which we had been spared along the south coast, in spite of the quantity of fruit we had eaten. This fever is very frequent on the south coast, but is very slight, and has only the name in common with that which, on the east coast of the Black Sea, frequently kills the sufferer by the first attack. We often looked back on the sea, but the night unfortunately speedily set in, and veiled the prospect. The moon, however, soon rose on the distant horizon, and lent us her borrowed light to illumine our road. At the highest point, close to the road and near a fountain, is a monument in memory of General Kutusoff.

At no great distance is a spot whence a most magnificent prospect of the south coast and the sea stretching out beyond it can be enjoyed. Here the Emperor Alexander once stood, and gazed in delight at the view. An obelisk now points out the spot where this occurred.

Unfortunately, we were compelled to renounce any hope of the same gratification. In vain did we search for the ruins of the iron gate which the former inhabitants of the south coast are said to have erected for the purpose of repelling the attacks of their northern foes. It must not be believed, however, that an iron gate was really built here; the name Demir Kapu, signifying the same in Turkish, generally means, in countries where a Turkish dialect is spoken, nothing more than that there is a pass there. Through the whole of the East, and especially in the northern countries of Asia Minor, as far as the Caspian, the name of Demir Kapu is repeatedly met with. The Persians employ the word Derbend for the same purpose, but not so generally, for it is restricted among them to a real defile.

At length we crossed the mountain ridge, which here lies about 2500 feet above the level of the Black Sea, and soon after reached the station of Tauschan (or Taffshan) Basar, i.e., the Hare Market. The landlord was again a German, and gladly placed before us the best that larder and cellar afforded. If people who have to gain their living by an inn set a higher price in these remote regions, it must be remembered that all provisions are here of a necessity dearer, and that the number of strangers who pass along this road and take any refreshment is very small. We paid gladly what he asked, for all we had was good, and excellently prepared.

The next morning we drove through Mahmud-Sultan to Simpheropol, a distance of nine-and-twenty versts. We had the Tent Mountain on our left, and delighted in the prospect it offered. Its summit as well as its steep sides were entirely destitute of timber; but in the valley which runs round it I saw shrubs, principally consisting of the winter pine. In a geological view, the northern acclivity is very valuable, as it is the only spot where Plutonic rocks and slate are visible. It could not well be otherwise, however, from the simple fact that the fissure in the northern edge of the ravine penetrated very deep here. Still it is inexplicable to me how, by the eruption of the Plutonic rock, no greater dislocation took place. Masses of rock, such as are found on the south coast

wherever eruptions took place, are sought here in vain. At the most the conglomerate, which partially covers the base of the Tchatir-dagh, and consisting of quartz, clay-slate, and sandstone, but generally only very loosely connected—though at several spots clearly displaying the effects of the volcanic influence—indicates the revolution which must have taken place here at one time.

On one side of the excavation which was formed by the fissure, a river now runs, called the Salgir, which receives the waters of the various streams rising on the Tchatir-dagh and its immediate neighbourhood, and after flowing through the centre of the peninsula, finally falls into the sea. How few the number of streams must be, or, rather, how insignificant the amount of water in these mountains is, can be judged from the fact that the Salgir, after a course of twenty-five miles, or at Simpheropol, contains so little water that it can be crossed almost dryshod, at least in the autumn. One reason for this, however, must be mentioned, that no large valley in the Crimea is so highly cultivated as that through which the Salgir flows, or where the water is in so great demand. I have already had occasion to speak in terms of praise of the industry and activity of the Crimean non-vagabond Tatars; all that I saw here made a more pleasant effect upon me, as I had always been accustomed to regard Islamism as the symbol of indolence as regarded agriculture and cultivation. In the Trans-Caucasian plains the innate laziness of the Mohammedan was not so prominent, as he could no longer claim privileges at the expense of his Christian countrymen. But in other Mohammedan countries, where he regards himself as the lord, to whom God has only given the Christians and the other sectarians to work for him, the follower of the Koran, whatever excellent qualities he may otherwise possess, is unendurable, through his indolence as much as through his beggarly pride.

The villages follow each other in rapid succession, and afforded the most pleasant prospect possible. The houses here differ greatly from those on the south coast; for their roofs, as was the case in Baktchi-Sarai, were not flat, but covered with tiles, and generally forming a right angle. Usually the orchard lay just behind the house. Their vivid green, the red roofs of the houses, and the graceful, brilliantly-white minarets, formed an exquisite picture.

While the road from Alushta to the mountain ridge was

serpentine and rather steep, it could scarcely be perceived, after leaving Tauschan Bazar, that the surface over which we drove was at all inclined. On approaching Simpheropol, the rocks which I had noticed in my former tour in the north of the mountains, re-appeared. At about six miles from that town, the nummulite stone recommenced, through which the Salgir has cut its way.

In Simpheropol we received, instead of our wagons, a post caleche, which General Narishkin placed at our service. My post receipt, however, stated wagons, and to escape any possible unpleasantness, I went forth with my friend from Tiflis to the police-office, in order to have the caleche inserted in the receipt. Unfortunately—or rather, fortunately, for I might have been exposed to much unpleasantness eventually—I was asked for my passport. I was forced to confess that I had none. This was considered impossible, especially as I had a so-called imperial post receipt (kronspodoroshne). A suspicion was naturally aroused, either that I obtained the latter in a dishonest manner, or that I had given my passport to some fugitive Pole. One dilemma was as bad as the other. The head of the police, however, did not dare to arrest me, especially as I stated I was specially recommended by the Prussian Government to the Russian, and he immediately perceived I was a foreigner: and he read me all the passages under which the Russian territory is allowed to be visited by a stranger. I told him the whole state of the case: that all my luggage had been for a long time buried in a ravine on the road from Erserum to Tiflis; how I had been recommended to the authorities at Tiflis by the Russian ambassador at Constantinople, and how my statement had been believed at Alexandropol, at my first crossing the Russian frontier, where my passport was demanded. I told him, further, that at Tiflis I had received all possible assistance in my scientific researches, and, for that purpose, during my travels in Trans-Caucasia, I had enjoyed the advantages of a post receipt, as if I were travelling by command of his Imperial Majesty. I, as a stranger, could not be expected to know that I required a special Russian passport in addition to this receipt. All that had been read to me from the legislative code, only referred to the circumstances under which ingress was permitted: but only those passages could affect me which explained to me the conditions under which I could quit Russia again. The head of the police frankly told me that there was no law in

existence for this peculiar case, for I was probably the first and only person who had travelled about for nearly a year without a passport. He was sorry, however, that he could not part with me until he had written to Tiflis, and received a corroboration of my statement thence. Under these circumstances, I should certainly have the pleasure of spending a few weeks longer in the Crimea.

The head of police reported all the circumstances to the governor. A curious circumstance now saved me from further unpleasantness. I had sent Herr von Humboldt a report from Tiflis, in the shape of a letter, about my later excursions to the Caspian Sea. This report was printed in the Prussian State journal, and was thence transferred to the Russian journal, the *Invalide*. The number containing my report had fortunately arrived the previous day in Simpheropol. The governor, in order to be certain about my identity, asked me various questions relative to my travels, which were more circumstantially detailed in the report. As my answers agreed perfectly with this, he no longer doubted but that I was the same person, though he did not believe he could venture to give me a Russian passport on his own responsibility. This could only be done in Odessa, where a Prussian consul resided. Although still without a passport, I was glad for all that to be able to escape from this unpleasant position with a whole skin, and consequently started, with the same fellow-travellers, on that afternoon.

From Simpheropol to Perekop, or the spot where the peninsula is connected with the continent, is a distance of 142 versts. If we add the distance from Simpheropol to the coast of the Black Sea, say to Alushta, which is 44 versts, we obtain the greatest breadth of the Crimea as 186 versts. The length from east to west is about 34 German miles, if we reckon in the peninsula of Kertch in the east.

On leaving Simpheropol, the nummulite limestone soon disappears, and a later tertiary limestone takes its place. But this speedily gives way to the newest quaternary formation, the so-called steppe limestone, which forms a low range of hills in the vicinity of Kertch. Barren rock is no longer visible: it is generally found covered with a layer of soil, which is based on alluvium, and is of varied thickness. The country becomes so flat when at a small distance from Simpheropol, that not even the slightest undulation is perceptible. This tedious uniformity lasts the whole long distance to

Perekop, and has not the slightest interruption. We did not see a single village till we reached Perekop. The five post-stations, through their wretched appearance, did but little to break the monotony. I will mention their names here, not because they have the slightest intrinsic value, but because they are generally misplaced on the maps: Ssarabouss, Trekablem, Aibar, Diurmench, and Yuschun; they lay in succession 17, 24, 22, 24, and 21 versts apart. Not a single herd of oxen or flock of sheep met us; and human beings we only saw at the post-stations.

Travellers describe the days of long-lasting monotony at sea, where they only have the sky above and the water beneath them; but there is, at any rate, an inequality in the surface continually produced by the slightest breeze. Dolphins follow them, greedily snapping at the fragments thrown overboard: and other marine monsters cause a variety. But a plain, such as is found in the north of the Crimea and in the south of Russia, affords the most melancholy prospect in autumn, when all vegetation has disappeared, and only the varieties of wormwood and horehound, or a few centauries, can be distinguished. The lovely autumn sky, which lay expanded above us, in no way formed a pleasant contrast to the dark grey soil. The withered stalks, on which not a single green, and frequently not even a withered, leaf could be seen, and the fissures in the ground, could not possibly be termed an agreeable change. The only feeling to which we could yield was that of boundlessness, which was grand, even in this melancholy desert. Wherever we turned we could only perceive the far distant horizon, without a single point on which the eye could rest, even for the shortest space of time.

Although only a third of the former population is now living in the Crimea, at any other period we should have found some life in these plains. In spring, indeed, a very busy scene is presented. Many thousand sheep and oxen, followed by shepherds and dogs, traverse the steppe, and feed on the juicy herbs. Particoloured and black starlings follow the flocks, to pick up the vermin, which are a tremendous plague to the poor beasts: and these in turn are pursued by hawks and eagles, to whom they serve as food. But, besides these, life is visible here. Poisonous and harmless snakes bask in the pleasant sunshine; lizards crawl about among the herbs, living principally on chafers and other insects. Beautiful butterflies flutter about the gaily-painted flowers,

But, when the last days of June arrive, the Tatars with their flocks draw nearer to the south coast, and spend the time from July to the season when the rain is turned into snow upon the Crimean mountain range, where a healthier and fresh pasturage is afforded them. In December they generally quit the yailas (mountain pasture grounds), and return to the steppes, where the buds of the herbs and grasses, after enjoying a few months' rest, are slowly germinating, and offer the cattle a scanty supply of nourishment.

Perekop has played an important part from the very earliest ages, when the place did not even exist under this name. The civilized nations of the Crimea built a wall across the isthmus, which is only three miles in diameter, and anxiously guarded the towers, to prevent inroads of the savage Scyths. The Perekop of the Tatars is indubitably situated on the same spot; but a wall no longer guards the isthmus, for its place is occupied by a deep moat, defended by towers. Hence the rapacious bands of the Tatar khan set out to plunder and devastate the northern Christians. These inroads generally took place in spring, when the rainy season had passed, and their horses found sufficient pasturage on the wide and desolate steppes of the present New Russia, and extended to Kiev and Moscow. Flames marked the road the Tatars had selected. Thousands of poor and innocent beings were annually carried off into slavery, and, unfortunately, Christians frequently acted as negotiators in the traffic between the Tatar khan and the Osmanli.

The present Perekop, generally marked on our maps as a fortress of high rank, did not command our attention for any length of time. Although the chief town in a department, the place is not of the slightest importance; and this would be the natural result when the North and the Crimea obeyed the same lord. We consequently started again the next morning to reach, as soon as possible, Aleshki, another departmental town, containing a population of four thousand. The same plain continued, but the soil and vegetation were altered. A sandy, and sometimes swampy, alluvium takes the place of the coat of earth, which is fertile in the spring at least. Instead of a steppe, it was a pampas.

The distance from Perekop to Aleshki is one hundred and two versts. A few miserable villages—Kalantjak, Bolshoi Kopan (Great Canal), and Kostogrivaya (Hill of Bones), thirty-three, thirty, and twenty-seven versts apart, lay on the road.

Our course, which from Simpheropol to Perekop had been northerly, with a slight inflection to the west, changed between Perekop and Aleshki to a north-western. Between Kostogrivaya and Aleshki a perfect desert of sand extends for seventeen versts, through which we had great difficulty in passing with our heavy vehicle.

Aleshki is situated on an arm of the Dnieper, which runs in an easterly direction here, and forms the northern boundary of the Tauric government. To the east, it extends as far as the little river of Berda. This was the extent of little Tatary at the middle of the last century. How well populated this small country must then have been in comparison to the present, is seen from the fact, that it could bring nearly one hundred thousand men into the field. It is true, that in the most flourishing period the hordes of Bundyak (between the Danube and Dniester), Yedisan (between the Dnieper and Dniester), and Kuban, obeyed the Tatar khans; but they furnished an equal contingent, so that the entire army of this powerful sovereign amounted to between two hundred and two hundred and fifty thousand men. It must be remembered, however, that everybody who could bear arms took part in these predatory inroads, and consequently the population may not have been so numerous as is generally supposed from these data.

At the present moment, the entire Tatar population of the Crimea hardly amounts to sixty thousand souls, who belong to the Djemboiluk horde, which is also settled on the continental portion of the Tauric government, and there amounts to twenty-five thousand persons. The Russian government, since its occupation of the country, has done everything to repopulate the deserted districts. The emperor made presents of estates to several grandees of the empire, on condition that they should establish colonies on their new possessions. Sectarians were removed to the infertile portions of the Tauric continent; while Germans, principally Mennonites and Catholics, occupied the better portions. Greeks and Armenians also met with a cordial reception. Finally, Jews were lately settled here, not greatly to the advantage of the country. In this manner Little Tatary has obtained a population which probably equals in number that of the latter half of the last century. I do not, however, believe that the present population can be doubled, as the country is not capable of supporting a million of persons without external aid. The only thing

which would bring a larger population to the Tauric government, would be greatly increased trade between north and south.

In Aleshki we went on board a sailing vessel, to pay a visit to the capital of the government of Cherson, situated on the north side of the Dnieper. A peculiar feeling overpowered me when I found myself on a river which possessed such importance in mediæval history. Tall reeds grew on the banks, and prevented all prospect. In these beds of osiers—as I mentioned at the commencement of this book—the Saporogians concealed themselves during the day, three hundred years ago, indubitably the boldest and bravest Cossacks who ever existed, and by night pulled down the river in their frail barks, to avenge themselves on the enemy of Christianity. The once valuable fortresses, Oczakov—which long withstood the Russian forces, and was eventually captured by the deeply injured Saporogians—and Kinburn, possess at the present time no importance. In the opposite direction, up the river, is the small town of Bereslav, where, during the period of the Tatar rule, a chain was affixed across the river, to restrain the predatory Cossacks.

All the larger and smaller steppe rivers, and among them the Dnieper, flow with extraordinary sluggishness, as may be imagined from their slight fall, separate towards the termination of their course into a number of arms, and finally disembogue into a large bay, to which the Russians give the name of Liman, before reaching the sea. The country containing the Dnieper Liman in the south, is alluvial; while to the north older littoral formations can be traced. This recently-deposited alluvial soil continues further to the east, and probably composes one-half of the whole Tatar mainland. The sea-sand, on which Aleshki is built, is eventually covered by an argillaceous earth, which grows deeper in an easterly direction. It probably rests on the granite, which higher up forms the so-called rapids of the Dnieper: and, through its horizontal position, does not allow the rain-water to penetrate to any depth. In the sand, however, water collects. It is necessary to dig down to it, in order to find a spring. While water is obtained in the vicinity of Aleshki at a depth varying from ten to twenty feet, further to the east a depth of eighty or a hundred feet is required. And yet the springs frequently flow there so scantily that a flock of only a hundred sheep can scarcely quench their thirst, and the water is perfectly dried up by the beginning of August.

We stopped to dine at Cherson, and were very fairly served in a German inn once again. Cherson is a remarkably pleasant town, bearing a close resemblance to Mannheim and other minor towns in our own country. The streets are not so wide as usual, and are paved, peculiarities which are rarely found in even the larger towns in the interior of Russia. The hopes entertained upon its foundation, and which caused this name to be given it, after the old city, have not been fulfilled. Cherson shot up rapidly, but Odessa soon so outstripped it, that it has become a very second-rate commercial town

When I was here in January, 1838, with Prince Suworoff, there was a most intense frost, which on the 12th reached 22° R. At the present visit, we enjoyed much more agreeable weather, and drove the same afternoon along a capital road to Nikolayeff, a distance of fifty-nine versts, in the same north-western direction we had been latterly following.

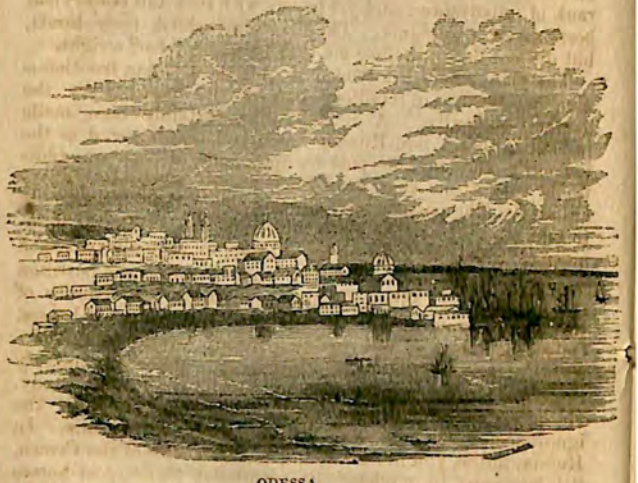
We decided on remaining at Nikolayeff, and inspecting the establishments so valuable for the Russian marine in the Black Sea. Ships of war were formerly built and repaired here. The town is not such an agreeable object as Cherson. The streets are of an extraordinary breadth, and the mistake I have already criticized is again found here, that the height of the one-storied houses is in no proportion to the breadth of the streets. The houses are principally composed of a ground-floor, and in some instances have another over it. As, in addition, the streets are not paved, and the houses are on three sides surrounded by gardens and yards, quick communication is terribly impeded by the straggling nature of the town. However, as no trade is done here, it is of no great consequence if the inhabitants of Nikolayeff employ a little longer time in meeting than is actually necessary. It must also be added that the greater portion of the inhabitants, and especially the males, spend more than half the year out of their own houses.

The town was of far greater importance recently than now, when Sebastopol has become the all-engrossing place in the Crimea. It formerly served as the winter-quarters of the crews of the Russian Black Sea fleet. Even now, the whole staff, with the rear-admiral at its head, has its quarters at Nikolayeff. Formerly, too, all the vessels of war were laid up near here through the winter; but now this takes place at Sebastopol. Nikolayeff lies at no great distance from the

junction of the Ingul with the Bug, which forms here a liman nearly three miles in width by thirty to forty miles in length, and consequently large enough to receive the whole Russian fleet.

We first visited Knorre, professor of astronomy, one of the kindest and most amiable *savans* in Russia, whose acquaintance I had formed in 1838. After inspecting the observatory, under the guidance of the director, we proceeded to the arsenal. Here more than a thousand men were employed in satisfying the demands of a fleet composed of twenty-one men-of-war, and sixty-six larger and smaller vessels. The greatest activity everywhere prevailed, and a degree of regularity, highly necessary in an establishment of this nature. Our guide, a young and agreeable officer of the navy, drew our attention to the different workshops and *depôts* in turn. I was principally interested in the model of a ship of the line, very cleverly executed, with the strictest attention to the minutest details. We were told that the rigging alone had cost a sum of 6000 silver rubles. But I do not intend to give a description of all we saw, especially as I am too little conversant with the requirements and results of such an establishment to be able to form an opinion about it.

The next morning, at a very early hour, we crossed the broad river Bug, in order to reach Odessa, which was seventy miles off, as soon as possible. Our course was south-western. We enjoyed the same pleasant weather as we had since our departure from Oreanda. The same steppe which we had found between Nikolayeff and Cherson continued beyond the Bug. Christian and Jewish settlers had taken the place of the Tatars belonging to the Yedesan horde, who inhabited this steppe at the commencement of the last half of the eighteenth century. As regards the soil, it was far more fertile than that in the steppe of Djemboiluk, or Tatar mainland, and even than that of the Crimean peninsula. It is true that the vegetation had long lost its verdant hue; but the white horehound and wormwood varieties, which had been so unpleasant to me in the Crimea, were generally missing here, and their place was taken by asters, senecions, and a few labiate varieties, some of which were still in blossom.



ODESSA.

CHAPTER X.

ODESSA.

Travel incidents—Passport regulations—The false Dr. Rosen—General Aglostichef—Appearance of the town—Comparison between the Russian colonies and those of England and North America—Odessa, regarded from the steppe—Boulevard: the great steps—The plague of 1838—Statistics—The winds—Chutors—The haven and the port—Odessa as entrepôt for the interior—Articles of commerce—Departure—Bessarabia—Lemberg—Cracow—Arrival at Jena.

It was rather a late hour when we arrived at Odessa, and found a decent lodging in an inn that suited our purses. We had been repeatedly delayed at the post-stations, and had it not been for the imperial post-receipt, which placed at our

disposal any quantity of horses, new unpleasantnesses might have happened to us. The calèche was not mentioned on the receipt, and hence one or two postmasters came to the conclusion that I had obtained it not in the most honest manner. In addition, not one of us wore an order, or had any title or rank of importance; and yet papers with such full powers had been given a foreigner. They certainly shook their heads, but did not dare to refuse me that to which I had a right.

The place where I intended to quit the Russian frontier—namely, Brody, in Gallicia—caused the postmasters the greatest difficulty. A mistake had certainly been made in Tiflis, that a non-Russian town had been entered as the journey's end in the post-receipt; and it was an additional misfortune that none knew exactly where Brody was situated. The postmasters, however, have strict orders only to take travellers to the place entered on the receipt. Consequently, before we got into the calèche, we were always asked where Brody really was, and in what direction the postilion must drive? To this ignorance we owed our opportunity of travelling through the whole of the Crimea with post-horses. Only once, when we returned to a station several weeks afterwards, the postmaster recognised us, and very *naïvely* remarked that he supposed we had missed the road to Brody. He probably noticed that we had taken advantage of the ignorance of the postmasters to take a tour of pleasure. In Russia, unless you are travelling in the service of the Crown, it is necessary to purchase the permission to use post-horses beforehand; and the price is regulated according to the number of miles you intend to travel. Although I was regarded as travelling by Imperial command, and had for that purpose obtained a post-receipt gratis at Tiflis, still I was not allowed to deviate from the route laid down; and if I wanted to make any excursion, I would have to purchase a special receipt for that purpose.

The first thing I was forced to do at Odessa was to claim the assistance of the Prussian consul in procuring a Russian passport, which would enable me to continue my journey. It was a very fortunate thing for me that I was personally acquainted with the Prussian consul, and could consequently be easily identified. An impostor had attempted, it seemed, only a few days before—by passing himself off as Dr. Rosen, my former fellow traveller, and now consul at Jerusalem—to obtain a considerable sum of money from the Prussian con-

sulate. It had been accidentally mentioned in one of the Russian papers that Dr. Rosen had parted from me, and was on his way to Odessa, *en route* for Constantinople. The consulate had been ordered to give us all possible aid, in case we reached Odessa during our travels. The impostor played his part so well, that he would probably have succeeded in executing his scheme, had I not arrived just in time. Without doubt he was told by some one that I had come to Odessa.

My reception at the Prussian consulate was consequently, and as may be readily imagined, rather mysterious. Persons who were in the office whispered together. I saw, it is true, by a sly glance turned now and then toward me, that I was the subject of their conversation, but I could the less account for the extraordinary politeness of the head of the office. They purposely tried to detain me longer than was necessary. Some of them went out, and returned with most meaning glances. At last I was freed from my painful embarrassment by the sudden arrival of the consul, whose acquaintance I had formed in 1838, and was on terms of intimacy with him during my stay of a couple of months; he first regarded me closely, and then saluted me in the most friendly manner. I heard with great amusement that I had been taken for an impostor, but the false Dr. Rosen for the real Simon Pure. My costume, which, after so long a journey in non-civilized countries, was not exactly suited for the higher classes of mercantile society, had also done its part in placing me in a false light. The pseudo-Rosen, however, did not make his appearance again, and every attempt to catch him was fruitless.

My passport, however, for all that, caused me much unpleasantness, for even the members of the Prussian consulate were of opinion that I had put it to an improper use, and probably given it to some unhappy Pole to secure his escape. It was considered here, as in Simpheropol, a matter of perfect impossibility that any one could travel for a whole year in Russia without a passport. The head of the passport office considered the circumstance of such importance, that he reported it to the military governor, General Aglosticheff.

Fortunately, I had also formed his acquaintance during my first travels in the Caucasus, in the year 1837, when General Aglosticheff was governor of Imeritia, in Trans-Caucasia, I had spent several days under his hospitable roof at Kutaiss. He had perceived that I was a *savan*, who cared nothing for

political affairs, and yet it required great persuasion and a species of guarantee from the Prussian consul ere he would give me a passport. But even when provided with it, the head of the chancellerie was very doubtful on the matter, and conferred several times with his superiors. So great was their distrust!

Odessa is a very peculiar town, in which nearly every nation of Europe is represented. Through this variety in the population it bears a great resemblance to Tiflis, except that here the confusion of peoples is still more confounded, and is more visible, through the publicity of living in the East. In Tiflis, too, the Asiatic element is more fully represented, while in Odessa, Europeans are most numerous. Odessa is certainly a Russian commercial town, but it possesses the Russian character in so slight a degree that it can be hardly considered so. The number of actual Russians is in no proportion to that of Greeks, Italians, and Germans. The military and swarms of officials are alone Russian, but even among the latter there are many non-Russians, principally French and German.

Odessa possesses something obtained from nearly every part of Europe. Externally, and principally in public life, in the opera, and buildings, we recognise the south European town, with a prominent Italian character. The shops of the first class are imitations of the French, but they do not equal them in elegance, though their owners are principally Frenchmen. The artisan class, as nearly through the whole of Russia, is German: German gardeners from the adjacent colonies supply the market with vegetables. Although society is generally regulated after the French model, and that language is principally spoken, still a yearning for English manners can be traced. This is very evident in the clubs. The cause may be found in the circumstance that Prince Woronzoff was educated in, and always displays a preference for the customs of, that country.

The Russians are very fond of calling Odessa the Russian Florence. In many respects it certainly has a distant resemblance, but generally it must be meant in joke rather than seriousness; for in vain do we seek in Odessa for one of the beauties which meet us at every step in Florence, and we can only see novelty and an attempt at art and beautifying, but not their result. Odessa, as we have already said, has an Italian look, especially from its flat-roofed houses; but the

broad streets, and the inhabitants moving so soberly along, remind us too clearly of Russia. In one respect Russians and Italians agree more than with other nations, namely, in the want of cleanliness, especially among the lower classes. The inns in Russia are, if possible, even worse than in Italy. The tidy pleasant rooms with clean beds, are as great a rarity in Italy as in Russia. Even in Petersburg, Moscow, and Odessa, there are only leathern mattresses and pillows in the inns, without any linen coverings. If they are to be had, they generally cost a very high price, a silver ruble being the usual charge. The Russian has so accustomed himself when travelling to take with him not only all his bedding, but all his washing utensils, as well as tea apparatus, that even in the larger towns, where all these things may probably be procured, he makes no exception. Every non-Russian who does not do the same, and consequently does not follow the national custom, is regarded with a contemptuous shrug of the shoulders if he grows angry and complains.

The Russians in their attempts at colonization form a perfect contrast to other nations, especially the English and Americans. These nations are generally careful, whenever they have settled in some remote corner of the world, to render their new abode comfortable as soon as they possibly can, and to enter into friendly communication with their neighbours. Before all, they therefore make roads and build inns; these are followed, when the population increases, by other methods of communication, among them railways: the former solitude has disappeared within a few years. Not so the Russian, who has a much less desire to connect himself with his fellow men. He only troubles himself in the first instance about the spot on which he has settled; it is a matter of indifference to him how other persons, whose absence he does not care for, can reach him, or whether they may desire to enter into friendly relations with him. This indifference toward strangers the Russ has not even toned down in a town like Odessa, which has had such a rapid growth in the short space of three quarters of a century, that it now contains nearly 100,000 inhabitants.

Although Odessa, however, possesses so much that is beautiful and attractive to the stranger, a person cannot feel at home in this large town, for every comfort is wanting. Even in Smyrna and Constantinople, two Turkish towns, the European finds much more to please him—apart from their

magnificent situation—than in Odessa. This forms a strange contrast to the luxurious mode of life of the richer inhabitants, among whom, however, there is more of Eastern pomp than of that solid comfort which can be no where in Europe so fully studied as in England.

It can scarcely be credited that a town, which is entirely dependent on the interior provinces, and has grown rich through their produce, has done nothing at all to facilitate the mode of communication for the poorer inhabitants of New Russia and Bessarabia. As far as I am aware, the streets of Odessa are only macadamized, but not paved; and even this roadway ceases after the barrier is once passed. As long as it is good weather and the ground is dry, all goes well, for it is quick travelling on the illimitable steppe; but woe to the traveller who is compelled to proceed into the interior of the country during a rainy season. Bottomless roads prevent his progress for days. It is a fortunate thing if he is not accustomed to luxury, and employs the so-called telega, a small, slight post-cart without seats. He would only progress very slowly in our heavy carriages or calèches.

On arriving at Odessa over the steppe, as was the case with ourselves, the traveller can scarcely believe his eyes, on seeing the rows of splendid houses and civilization in all its magnificence, after gazing for so long on nothing but sky and steppe. Odessa is built on a hill, which falls off rather steeply towards the sea. Myriads of shells, of which the steppe lime is composed, are here connected in a tolerably firm mass, and bear on their ridge numerous wooden tenements, by the side of splendid palaces. It is a pity that even in the usually so pure autumn breeze a grey cloud hangs over Odessa, in consequence of the quantity of dust, which never allows a clear prospect. This cloud, consisting of the finest portions of the steppe limestone, is the more unendurable, as it has a very injurious effect on the eyes, especially of strangers, and easily produces dangerous inflammations.

I have hitherto said but little in favour of the Russian Florence, but have already hinted that the town contains much that is valuable, which even the greatest Russo-phobist must concede. In the first place, externally and internally, it affords an agreeable prospect. Before all, the side towards the sea is adorned with a row of magnificent houses and palaces, which would be an ornament to the finest town. Prince Woronzoff, the highest officials, and the rich merchants,

have their residences there. A splendid walk, planted with rows of trees, occupies the broad space between this row of houses and the edge of the declivity, upon which, during the lovely autumn evenings, hundreds of promenaders enjoy the pleasant and cooling sea-breeze, as well as the view across the sea, that faithful image of infinity. This walk is called the Boulevard. Nearly at the centre, the Boulevard is of a crescent shape, and bears the statue of a man who did an immensity for the town—the Duc de Richelieu. No more suitable place could have been selected than this, where the duke, surrounded by magnificent buildings, appears to be gazing out on the sea, whence the town has acquired that importance which he predicted.

A flight of steps, unequalled in the world for beauty, leads down the slope to the strand and the harbour. To me, its breadth of 200 feet appeared too great for its height, which is only 80 feet; and had it been somewhat narrower, it would have been far more magnificent. Immense arches bear the blocks of stone; and beneath, the space has been employed for the purpose of maintaining regular communication along the strand. Although so many parts of the town are apparently dead, this is a scene of great activity; for hundreds of carts are constantly bringing in goods—though they take less quantities down for exportation—and thousands of persons are engaged in maintaining the connexion between the west and the east of Europe.

A valley, which could be easily and advantageously employed for the improvement of the town, separates the Boulevard to the south from another portion of the town. Here stood once the Turkish fortress, Hadji Bey, which Admiral Ribas destroyed in 1794, and Odessa rose on its ruins. It was believed in Petersburg that the old town of Odessus had formerly stood here. In this, the oldest, portion are the citadel, the lazaretto, and the so-called plague quarter. I could not, without a shudder, enter a place where, in January, 1838, on my first visit to Odessa, I had an opportunity of seeing all the horrors of the plague. At that time I repeatedly accompanied Prince Woronzoff on his visits of inspection, and saw the wretched beings suffering from the fearful disease, very few of whom recovered. I saw, with my own eyes, those who had died of the plague thrown into a pit filled with unslacked lime. At this fearful season, it was only the energy and the self-sacrificing care of the prince, to which it was

owing that the plague did not spread further. It was a curious circumstance that an earthquake took place just about the same time, though, fortunately, it only lasted a few seconds, and did but slight mischief (at least, within the town). As far as I am aware, Odessa has only been twice visited by the plague, in 1812 and 1838. But while nearly 2000 died in 1812, out of a much smaller population; in 1838, only 123 died, owing to the precautionary measures so speedily taken by the prince.

Although the Boulevard, with the flight of steps, indubitably represents the handsomest portion of the town, other parts also possess much that is fine. Above all, the colonnades pleased me, whenever I regarded them; for the style in which they are built harmonizes admirably with the surrounding buildings. In addition, the opera house, the Richelieu lyceum, the lazaretto, the barracks, the orphan house, the château of Count Ettling, and several others deserve mentioning. Although, perhaps, wretched huts do not stand close to magnificent houses, in such frequency as may be seen in Constantinople, still, in Odessa, the contrast is at times very striking, where we see houses standing close together, one of which rivals the finest building in Europe for elegance and magnificence, while the next would scarcely satisfy the modest demands of an easily-pleased small tradesman.

Odessa has increased rapidly, so I am told, since my visit. In 1838, it contained about 2500 houses, and 50,000 inhabitants; six years later, or in 1844, the population had increased to some 60,000; and in 1854, it was supposed that it amounted to 100,000. Time will teach us whether the present war will afford any check to this rapid growth. We have had frequent instances where rich towns have been as rapidly eclipsed by others, as those that they had eclipsed during their own growth.

Odessa boasts eight public squares. It is possible that these, when fine houses have been built round them, will have a more pleasant effect, and not give the idea of a wearisome solitude. At present, the churches which have been built in them are far from being sufficient. At the time of my visit there were sixty and more streets in Odessa, and eight-and-twenty churches. The town itself has two suburbs, of which one lies at the base of the hill. In addition, however, twelve villages are counted as a portion of Odessa. A simple wall surrounds the actual town, and is in this intended

to prevent smuggling more than for purposes of defence. For all that, Odessa has been recently called a fortified town: it is certainly very likely that a quantity of towers and other means of defence, in addition to the citadel, have been erected during the threatening aspect of a collision with the Western Powers. The defence of the harbour would probably be the first object.

The port itself is of no very great importance. Although the entrance is convenient, and the anchorage excellent, it does not appear to have sufficient depth of water for ships of large tonnage. There is, besides, a great defect in its being too open and exposed to the most dangerous winds—the south and south-east. These blow generally at the time of the equinox, and have caused fearful accidents in the Black Sea, by which thousands of vessels have been lost. In addition, three large rivers, the Bug, Dniester, and Dnieper, pour immense masses of water into the bay, on the opposite side, and when the south or south-west wind is blowing they produce what is called a cross sea. There have been frequent instances, also, in which a mighty wave, after crossing the Black Sea, has burst into the harbour, and dashed over the ships at anchor there. Credible witnesses, who lived on the Boulevard, and had often seen the in-rush of such a wave, could not find words sufficiently strong to describe the rending and crashing which is heard on such an occasion. It has even occurred that vessels which have not run in one of the two safe harbours, have been dragged from the roads by the retiring wave, and exposed to the succeeding billows far out to sea. It can be easily supposed that, under such circumstances, the vessel and all on board are lost without a hope of safety.

In summer these dangerous winds are a rarity. At that season a north wind generally blows: but, even if this is better for the safety of vessels, it is a source of great unpleasantness for the inhabitants of the town, that it brings with it, especially in the dog-days, an insupportable heat, which only slackens towards evening, and a cloud of dust, owing to its passage across the dried-up and parched pampas and steppe. To this is owing the circumstance that the town is not so healthy as might be imagined from its high situation. Every one who can quits his town residence at this period, and goes to his country house (chutor), frequently

a very considerable distance from Odessa, and which is either his own property or held on lease. Through these villas the environs of the town, especially to the south, are rendered very pleasant, as the owner's first care is to provide himself with cool and shade by planting trees and shrubs. The government actively supports any undertakings of this nature, and has already expended very large sums in planting *allées*, groves, and woods. At first starting this was a matter of extreme difficulty, in such an unwooded country as this, and the first experiments were failures; but now that there is some wood growing, even though so slight, it can be easily increased. In this matter much has been effected by the Botanic Garden, under the direction of Professor von Nordmann, the well-known naturalist.

But I will return to my description of the port. On the part of the government, everything that was possible has been effected to render the southerly winds less dangerous. In the first place, their injurious effect has been lessened by the erection of two breakwaters, which divide the whole bay into three parts. These run out some distance into the sea, and there is a battery at the extremity of each. The northern one of these is the one which has very recently received the name of Schegaliff's battery, and was defended with much skill and bravery against the allied squadron. Close to the southern battery stands a lighthouse, which renders it possible to enter the harbour by night.

The central portion of the bay forms the Roads, while to the right (or further to the south) is the Quarantine Bay, and to the left (or in a northerly direction) is the War or Pratique Bay. All the non-Russian vessels are ordered into the former, even when they do not come from suspected places. A special portion is set apart for those which are forced to go into quarantine. On the steep shore above is the citadel, and threatens any vessel whose master dared to leave the station allotted to him before he has obtained permission: it would be blown out of the water without any delay.

The haven is much smaller at the northern side, but, through this, more secure from the dangerous winds. It bears the name of the Pratique Harbour, which vessels can enter or quit whenever they please (*in libera pratica*). Lately, it appears to have been set apart for vessels of war and the ten guard vessels, and closed against all others, even

if they are Russian. These ten vessels are employed in controlling the native merchantmen, and order them to enter the harbour they think proper.

Odessa forms the *entrepôt* for the interior of Bessarabia, New Russia, and even a few of the central Russian governments, as Podolia, Volhynia, and the Ukraine. Produce is generally exported in an unmanufactured state, while only few foreign goods are admitted, owing to the well-known protective system in Russia. These, again, are more of benefit to the town itself, which is a free port, than to the interior. From this cause, Odessa, although a Russian town, contains but very little of Russian manufacture. All, with the exception of raw produce, seen there, is obtained from Europe. On an average, the export trade produces an annual amount of forty million silver rubles, or twice or thrice more than the imports.

The objects of exportation are principally corn (the greater part rye), tallow, and wool. The first of these is derived from the Ukraine, Podolia, and Bessarabia; the other two from New Russia. The tallow is chiefly purchased by the English, and used for machinery purposes. It is generally procured from animals. Meat, through the paucity of consumption, has so small a value in the above-mentioned provinces of Russia, that it is usually boiled down for the sake of the fat. As regards the wool, it is generally of an inferior sort, and commands about the same price as the Australian. The great expectations formerly entertained about sheep breeding in New Russia, have been disappointed. The Merino sheep, which was procured from Germany at a very great expense, has died out again, and the steppe sheep has taken its place.

The number of ships which quitted the port annually amounted to about 1500 during the last years, and is continually on the increase.

My stay in Odessa only lasted a few days. I was well acquainted with it already, as, at the beginning of 1838, I had, spite of plague and earthquake, spent eight weeks there in the most pleasant company. This short period was amply sufficient to re-awaken my recollections, and to look up my old acquaintances; for I felt a powerful yearning for home, and the dear ones it contained. I quickly travelled through Tiraspol; I entered Bessarabia, which is separated from New Russia by the Dniester at Bender, a fortress rendered so

notorious by Charles XII.'s bold campaign. This fertile province, at least the portion to the north-west of the sea, deserves attention. On all sides I saw cultivated fields and luxuriant meadows, which, when a sensible system of agriculture has taken root, will produce a double or triple amount of produce. At Nova Selitza, I at last quitted the immense Russian empire, and entered the Bukowina. A German post-chaise was the first thing that reminded me of my beloved fatherland. I travelled in agreeable company *viâ* Tchernowitz to Lemberg, stopped there a couple of days, and then proceeded to Cracow, the former residence of the powerful Polish kings. Several of them lie buried there. Cracow afterwards became a republic, but only dreamed for a short while of that liberty which it never seriously enjoyed. I then hastened through Breslau, Dresden, and Leipzig, to Jena, where I was residing at that time, which town I reached safely after many dangers, sacrifices, and exertions.

CHAPTER XI.

CLIMATE AND VEGETATION OF THE CRIMEAN SOUTH COAST.

Geographical position—Summer—Spring—Autumn—Winter—Peculiarities in the vegetation—Foreign or remarkable plants.

If we regard the climate of the Crimea, we find a quantity of peculiarities which have not been at all satisfactorily explained. The south coast is situated between 44° and 45°, of northern latitude—that is, at an equal distance from the equator with northern Italy, or Genoa and Venice. In addition, as the Crimea is a peninsula, it possesses a sea climate, and even though the northern plains are exposed to the cold winds of eastern Europe, the southern coast is entirely protected by a range of mountains of an average elevation of 4000 feet. West winds are prevalent; but the current of air generally comes from the south. From these data, a mild climate might be expected, which would bear comparison with that of northern Italy.

The climate, however, is generally harsh, and does not even correspond to that of Milan, which lies a degree higher; it has much in common with that of northern France; but it possesses so many peculiarities, that it differs from it just as much as it agrees. If any value can be attached to the vegetation, it should be more properly compared with that portion of England lying 6° to 8° higher than the Crimea, and also possessing a maritime climate.

Regular meteorological observations, as far as I am aware, have not yet been made, and isothermal tables cannot be drawn up. On an average, a warmth of 17° to 20° R. prevails from May to August. The generally barren rocks, and the boulders on the slopes, increase the warmth by day excessively. The heated air rises, and its place is taken by the colder sea breeze. During the summer months, therefore, the land breeze is enjoyed by day. At sunset, a calm sets in, and generally lasts through the whole of the night. This is the principal reason why the temperature falls so slightly by

night, and at times is even higher than by day. The greatest heat which Herr Rögner noticed in July, once reached 27° R., while usually the thermometer on the hottest days only rose to 24°. The heat is the more perceptible, as rain at this season is very rare. Dew is also, very strange to say, rarely visible on the south coast, and at several spots has never been seen. Although the coast range is, on an average, only 4000 feet in height, still its yailas—i.e., the spots on the ridge employed for pasturage—are excessively cold. This may, possibly, be produced by the icy north-east winds which blow across from Siberia. While on the coast during summer the heat, even at an elevation of 500 to 800 feet, very rarely falls under 17°, on the yailas, 10° and 12°, and even 7°, are common.

The south coast has no real autumn, but a double spring, in so far as by spring we understand the reproduction of vegetation. The actual spring, which agrees with ours as regards season, at times lasting from the middle of April to the middle of June—more generally, however, beginning in March and ending in May—is not the finest part of the year, as it is with us: the greatest variation prevails here in every respect. This the south coast shares in common with many Eastern countries. At the beginning of March there is frequently splendid weather, and the vegetation makes extraordinary progress; when, suddenly, cool, even cold weather sets in in April, and the thermometer frequently sinks below zero. It seems as if winter were recommencing.

The autumn, which seems like a second spring, is far more pleasant. A portion of the shrubs and trees put forth new shoots, and even are covered with a fresh display of foliage. Towards the end of August, the heat generally decreases, and autumnal days set in: rain alternates with wind and fine weather. Towards the equinox, the wind becomes a storm, frequently a hurricane, and causes the most fearful desolation. At this season there is a good deal of rain. The soil which, till the beginning of spring, was parched and burnt up, eagerly imbibes the moisture. Springs which, at the end of August, were quite dried up, begin to flow again.

In case it has rained itself out—to use the common phrase—by the 5th or 6th October, the sky is suddenly cleared, and the most beautiful weather in the whole year sets in. While the last half of October, November, and December are frequently a very disagreeable season in Germany, on the south

coast it is the most pleasant in the year, and the vegetation is very luxuriant. These regularly beautiful days last till the second half of December, and very frequently till the new year.

From that period, wind and rain again alternate with sunshine. The thermometer vacillates between 2° to 6° of warmth, falls at times below zero, but rises also to 10°. The rain at times changes into snow, which rarely lasts longer than an hour, and melts as soon as it has fallen. Towards the end of February, or beginning of March, extreme cold sets in, and the thermometer not unrarely sinks 10° or 12° below freezing point. In the middle of March, there are frequently several fine though cold days, which last for a week or more. At the vernal equinox, another change occurs, which is generally accompanied by a fall in temperature. The mercury sinks sometimes to 3° R.

The period from the end of January to the middle of April, however, varies in other years from the rule I have just given. There have been years when there was hardly any cold in February, and the winter was at an end. This reminds me forcibly of the climate of Tiflis, where I spent the winters of 1836-7, and 1843-4. On the 20th January, 1837, I spent the night in the open air, without any extra clothing, during a shooting excursion. It was at that time lovely weather; the almond trees were beginning to blossom, and on the 18th of February they were covered with splendid flowers. In the middle of April, on the contrary, it was so cold that I did not dare to go out without a great coat.

On the south coast of the Crimea, the weather was fine in 1843 up to the 17th March; the thermometer had never once fallen to freezing point. In January, it stood once at 15°, in February at 13½°. A frost suddenly set in on the 18th March, and the mercury fell to 10°. It was not till the 29th March that milder weather set in; and at the beginning of April, the thermometer showed 16° of warmth. In 1844, the winter was generally mild; but on the 11th April, the mercury fell to + 1°, and on the 13th to — 3°. In the year 1840, there were 8° of cold on the first Easter festival.

It can be easily imagined that such a variable climate has no good effect on the vegetation. A quantity of shrubs and trees, which flourish in England in the open air, will not grow at all, or only very sparingly on the south coast. But, in addition, numerous interesting peculiarities may be remarked.

While oranges, even when covered, are generally frost-bitten, and the myrtle appears very scrubby in the open air, a date-palm (*Phœnix dactylifera*, L.) which will no longer grow at Smyrna, where it flourished in the time of the Greeks, has stood several winters' exposure. It is remarkable that, on the other hand, azalias and rhododendrons, which flourish excellently among us, generally die on the south coast when exposed in the open air. The most extraordinary thing is, that our juniper, whether sown or planted in slips, will not grow on the south coast, and generally dies in three or four years at the most, though most frequently after one winter.

All the trees in the Crimea have a propensity for a bush form, and none of them grow to such a height as among us. Even the savin tree does not grow higher than from twelve to sixteen feet on the south coast. Shrubs which have perennial leaves only grow from September to New Year's Day, and are perfectly at a standstill during the summer months. The other shrubs, however, like ours, put forth shoots in spring, and grow rapidly; but in summer, when but little rain, and hardly any dew, falls, there is more or less cessation in their growth. Fruit slips often grow to man's height by June, and are of the thickness of a finger: in the second year they frequently have a very handsome crown. Stone-fruit kernels, sown in spring, germinate rapidly, and can frequently be grafted in the ensuing year. A slip of the *Cupressus pyramidalis*, Targ., Toz., or our common cypress, attained a height of twelve feet by the fourth year. There is one more peculiarity to be mentioned as found in the Crimea—namely, that the summer stock survives the winter: a circumstance, however, that at times occurs in our gardens.

As regards vegetables, none appeared disposed to prosper on the south coast. They want that delicate taste which our varieties have. Spinach grows very poorly. Salad must be sown in autumn, to come to a head in spring. If it is sown in February and March, it certainly grows well, but soon runs to stalk. Peas and beans will only grow in very damp places. Artificial irrigation is not of much service. All the varieties of the rape family grow out of the ground, and have insignificant and very fibrous roots. This is especially the case with the carrot. In order to have any chance of success, vege-

tables must be grown in very richly manured soil. According to Herr Rögner, the manure must form two-thirds of the soil.

A list of the shrubs and trees which, although not indigenous to the Crimea, are largely used in the plantations and gardens there, may not be uninteresting. In the number will be found many which do not grow in the open air in Central and Northern Germany. I have added to this list several herbaceous plants, as they greatly improve the various groups, and withstand, in a greater or less degree, the climate of the Crimea. In order to show what countries have furnished these plants, I have also appended their original *habitat*. Those trees are, at the same time, introduced in the list which, though growing wild in Germany, are not natives of the Crimea. Of course I need not add, that the tropical varieties are under shelter during the winter.

I. *Magnoliaceæ.*

1. Magnolia, laurel-leaved, L. North America.
2. „ long-leaved. do.
3. „ purple, Thunb. Japan.
4. „ rusty-leaved, Andr. China.
5. „ umbrella, Desc. N. America.
6. „ blue-flowered, L. do.
7. Illicium anisatum, L. (aniseed tree). Japan, China.
8. Liriodendron tulipiferum, L. (common tulip tree). do.

II. *Anonaceæ.*

9. Asinina triloba, Dun. Pennsylvania, Florida.

III. *Menispermeæ.*

10. Canada moonseed, L. N. America.
11. Jagged or laurel-leaved do., Dec. East Indies.

IV. *Berberideæ.*

12. Mahonia trifolia, Schult. Mexico.
13. „ fasciculata, Sims. New Grenada.
14. „ diversifolia, Sweet. Laplata.
15. Berberry, Iberian, Stev. Caucasus.
16. „ common, L. Europe, the East.
17. Barrenwort, feathered, Fisch. Persia.

V. *Ranunculaceæ.*

18. Clematis, large-flowered, Thunb. Japan.
19. „ blue, Sieb., β. long-flowered. do.
20. „ sweet-scented, Wall. East Indies.
21. „ Himalayan? (Nepalensis, D.C., or Montana, Buch. ?).
22. Pœony, shrubby, Sims. China.

VI. *Tamariciæ.*

23. Tamarisk, tetrandra, Pall. Southern Russia.

VII. *Cistiniæ.*

24. Rock rose, laurel-leaved, L. Spain.

VIII. *Cruciferæ.*

25. Candytuft, evergreen, L. South of Europe.

IX. *Ternstroemiaceæ.*

26. Aristotelia Macqui, l'Herit. Chili.
27. Gordonia, smooth, L. N. America.
28. „ pubescent, Lam. Carolina.
29. Stewartia Malachodendron, L. North America.
30. Camellia, Lady Banks', Lindl. China.
31. „ Japan rose, L. Japan.
32. Thea Bohea, L. China, Japan.
33. „ green, L. China.

X. *Sterculiaceæ.*

34. Sterculia, palm-tree-leaved, L. fil. China, Japan.

XI. *Aurantiaceæ.*

35. Citrus Aurantium, L. Northern Africa.

XII. *Meliaceæ.*

36. Bread tree, common. Syria.
37. „ ash-leaved. East Indies.

XIII. *Pittosporeæ.*

38. Pittosporum, Chinese, Ait. China, Japan.

XIV. *Hypericineæ.*

39. St. John's Wort, wart-leaved, L. Balearic Isles.
40. „ great-flowered, L. East.
41. Androsæmum officinale, All. South of Europe.

XV. *Tiliaceæ.*

42. Lime tree, broad-leaved, Ehrh. Central Europe.

XVI. *Malvaceæ.*

43. Hibiscus, Syrian, L. Syria.

XVII. *Hippocastaneæ.*

44. Horse chesnut, common. Thibet.

XVIII. *Sapindaceæ.*

45. Koelreuteria, panicled, Laxm. China.

XIX. *Diosmeæ.*

46. Corræa, white-flowered. New Holland.

XX. *Coriariaceæ.*

47. Coriaria, myrtle-leaved. South of Europe, N. Africa.

XXI. *Melantheæ.*

48. Honeyflower, greater, L. South Africa.

XXII. *Zanthoxyleæ.*

49. Shrubby trefoil, three-leaved, L. Virginia.

XXIII. *Connaraceæ.*

50. Widow-wail, tricoccous, L. S. Europe.
51. Ailanthus, Chinese, Dsf. China, East Indies.

XXIV. *Anacardiaceæ.*

52. Sumach, Venice, L. East, Eastern Europe.
53. „ Coriaria-leaved. do.
54. „ Virginian. North America.
55. Pistacia tree, turpentine, L. East, S. Europe.

XXV. *Juglandeæ.*

56. Pterocarya, Caucasian, Kunth. Caucasus.
57. Juglans, royal, L. S. Europe, East.

XXVI. *Mimoseæ.*

58. Acacia, smooth, Willd. East.
59. „ sponge tree, Willd. West Indies.
60. „ white, Lk. New Holland.
61. „ Houston's. Chili.
62. „ thorny, Willd. New Granada.

XXVII. *Cæsalpiniaceæ.*

63. Judas tree, European, L. East of Europe.
64. „ American, L. N. America.
65. Bonduc, Canadian, Lam. do.
66. Carib tree, common, L. S. Europe, N. America.
67. Cassia, perennial, L. N. America.
68. „ corymbose, L. S. America.
69. Honey locust tree, Caspian, Dsf. East.
70. „ three-horned, L. N. America.
71. „ Chinese, Lam. China.

XXVIII. *Papilionaceæ.*

72. Edwardsia, small-leaved, Salisb. New Zealand.
73. „ large-leaved, Salisb. do.
74. Sophora, Japanese. Japan, China.
75. Coral tree, cockscomb, L. Brazil.
76. Kidney bean, small-flowered, L. E. Indies.
77. Coronilla, swan-leaved, L. Western Europe.
78. Robinia, common, L. N. America.
79. „ clammy, Vent. do.
80. Caragana, frutescent, Dec. Siberia.
81. Calutea, eastern, Lam. East.
82. „ arborescent, L. S. Europe.
83. Broom, Spanish, L. do.
84. Furze, common. W. Europe.
85. Cytisus, laburnum, L. do.
86. Genista, large-flowered. Spain.

XXIX. *Amygdaleæ.*

87. Cherry-tree, common laurel, L. South of Europe.
88. „ apricot, L. Armenia.

89. Cherry-tree, cultivated plum. Britain.
90. „ bullace plum. Central Europe.
91. „ cultivated, L. Asia Minor, Pontus.
92. „ small-fruited, L. do.
93. Almond, common, L. Barbary.
94. „ peach, Persia.

XXX. *Rosaceæ.*

95. Bramble, rose-leaved, Sm. Mauritius.
96. Rose, red china, Curt. E. Indies.
97. „ evergreen. Germany.
98. „ noisette red. E. Indies.
99. „ Grevillei Hook. China.
100. „ banksian R., Br. do.
101. „ macartney, Roxb. do.
102. „ pale china. do., E. Indies.
103. „ garden tea. E. Indies.
104. „ shining china. Roxb. do., China.
105. „ musk, Ait. East.
106. „ hundred-leaved. S. Europe.
107. „ officinal, L. do., and Central.
108. „ white. Europe.
109. „ burnet-leaved. S. Europe.
110. „ altaica, Willd. Siberia.
111. „ eglantine, L. S. Europe.
112. „ cinnamon, L. do., and Central.

XXXI. *Pomaceæ.*

113. Pear, common, L. S. Europe and East.
114. Apple, „ do.
115. Quince, common, Pers. do.
116. „ Japan, Pers. Japan.
117. „ Lusitanian, Borkh. Spain and Portugal.
118. Raphiolepis indica, L. E. Indies, China.
119. „ willow-leaved, Lindl. China.
120. Photinia serrulata, Lindl. Japan.

XXXII. *Calycantheæ.*

121. Allspice, Carolina, L. Carolina.
122. „ sweet-scented, Lindl. Japan, China.

XXXIII. *Granateæ.*

123. Pomegranate, common, L. East.

XXXIV. *Myrteæ.*

124. Myrtle, common, L. S. Europe.

XXXV. *Salicaliaceæ.*

125. Lagerstroemia, Indian, Dec. China, Japan.

XXXVI. *Rhamneæ.*

126. Colletia, wild, Gill and Hook. Chili.
127. Buckthorn, Alaternus, L. S. Europe, East.
128. Paliurus, eastern. East.

XXXVII. *Celastrineæ.*

129. Staff-tree, climbing, L. N. America.
130. „ box-leaved, L. S. Africa.
131. Spindletree, Japan, L. Japan.

XXXVIII. *Saxifrageæ.*

132. Escallonia, red, Pers. Chili.
133. „ flowering, H. B. K. New Granada.
134. „ handsome, Hort. Habitat unknown.
135. Hydrangea, garden, Dec. China.

XXXIX. *Onagrariaceæ.*

136. Fuchsia, scarlet, L. S. America.
137. „ boxthorn-leaved. Mexico.

XL. *Ribesiaceæ.*

138. Currant, smooth gooseberry. Britain.
139. „ rough „ do.
140. „ reclined. Caucasus. (?)
141. „ red, L. S. Europe.
142. „ Alpine, L. do., and Central.
143. „ golden. N. America.
144. „ bright red. do.

XLI. *Cacteæ.*

145. Opuntia coccinellifera, Mill. S. America.

XLII. *Passifloreæ.*

146. Passion-flower, blue, L. Peru.
147. „ clustering. Brazil.
148. „ hybrid. Habitat unknown.

XLIII. *Umbelliferæ.*

149. Thorough wax, shrubby. S. Europe, N. Africa.

XLIV. *Corneæ.*

150. Gold-plant, blotch-leaved, L. Japan.
151. Benthamia, fragiferous, Endl. Nepal.

XLV. *Caprifoliaceæ.*

152. Honeysuckle, woodbine. Central and S. Europe.
153. „ early red. do.
154. „ evergreen, L. N. America.
155. „ Chinese, Wats. China.
156. St. Peter's wort, common, Mich. N. America.
157. Viburnum, guelder rose, L. Europe, East.
158. „ laurestine. S. Europe, N. Africa.
159. „ warty, Pers. Canaries.

XLVI. *Campanulaceæ.*

160. Bell-flower, pyramidal, L. S. Europe.
161. Throatwort, blue-flowered. Sardinia, N. Africa.

XLVII. *Compositæ.*

162. Nardosmia, fragrant, Rchb. S. Europe, N. Africa.
163. Lavender cotton, common. S. Europe.
164. Chamomile, cape, Thunb. S. Africa.
165. Feverfew, Chinese, Dec. Japan and China.
166. Groundsel, purple. Teneriffe.
167. „ grey. Europe.
168. Dahlia, variegated, Dsf. Mexico.

XLVIII. *Vacciniaceæ.*

169. Whortleberry, Madeira, East.

XLIX. *Ericaceæ.*

170. Rhododendron, purple, L. Caucasus, Asia Minor.
171. „ large, L. N. America.

172. Azalea, yellow-flowered. Caucasus.
173. „ white-flowered. N. America.
174. „ red-flowered. do.
175. Arbutus, common. S. Europe, East.
176. Heath tree. do.
177. „ drooping-flowered. do.
178. „ Mediterranean, L. do.

L. *Aquifoliaceæ.*

179. Holly, common, L. W. and S. Europe, East.

LI. *Ebenaceæ.*

180. Date plane, European. East.
181. „ two-flowered. Japan.

LII. *Myrsineæ.*

182. Myrsine, African. Abyssinia.

LIII. *Apocyneæ.*

183. Arduina, wild, E. Mey. S. Africa.
184. Periwinkle, greater, L. S. Europe.
185. Rosebay, oleander, L. do.
186. „ sweet-scented. E. Indies.

LIV. *Oleaceæ.*

187. Ash, common, L. Europe.
188. „ sharp-leaved. Caucasus.
189. „ party-leaved. N. America.
190. „ flowering. S. Europe.
191. Lilac, common, L. E. Europe.
192. „ Chinese, Willd. China.
193. „ Persian. Persia.
194. „ Josikæa. Hungary.
195. Privet, waxtree, Ait. China.
196. „ Italian, Mill. Italy.
197. Olive tree, fragrant, Thunb. China.
198. „ European, L. S. Europe, East.
199. Phillyræa, narrow-leaved. do.
200. „ privet-leaved. do.
201. „ broad-leaved. do.
202. Fontanesia, phillyræa-leaved, Lab. Syria.

LV. *Jasmineæ.*

203. Jasmine, yellow. S. Europe, N. Africa.
204. „ dwarf yellow. S. Europe.
205. „ large-flowered. do.
206. „ ear-leaved. E. Indies.
207. „ white. China.

LVI. *Polemoniaceæ.*

208. Cobæa, climbing, Cav. Mexico.

LVII. *Solanaceæ.*

209. Nightshade, winter cherry. Madeira.
210. Cestrum, willow-leaved. Chili.

LVIII. *Bignoniaceæ.*

211. Tecoma, extending, Juss. N. America.
212. „ Cape, G. Don. S. Africa.
213. Æscynanthus, large-flowered, Spreng. Bengal.
214. Trumpet flower, four-leaved. N. America.
215. Catalpa, common, Sims. do.

LIX. *Acanthaceæ.*

216. Gendarussa Adhatoda, Steud. Ceylon.

LX. *Scrophularineæ.*

217. Halleria, shining. S. Africa.
218. Chelone, bearded. Chili.

LXI. *Labiatæ.*

219. Rosemary, officinal. S. Europe, N. Africa.
220. Sage, Graham's, Benth. Mexico.
221. „ Germander, leaved. do.
222. „ Jerusalem. S.-E. of Europe.
223. Germander, shrubby. S. Europe, N. Africa.

LXII. *Primuleæ.*

224. Primrose, Chinese, Lour. China.

LXIII. *Aristolochiaceæ.*

225. Birthwort, long-rooted, L. S. Europe, East.

LXIV. *Laurinæ.*

226. Laurel, noble, L. S. Europe, East.
227. Oreodaphne, fœtens, Nees. Madeira.
228. Persea, Carolina, Nees. N. America.
229. „ Indian, Spr. Azores, Canaries.
230. Sassafras, officinal, Nees. N. America.

LXV. *Elæagneæ.*

231. Oleaster, garden, Bieb. East.

LXVI. *Thymeleaceæ.*

232. Daphne, laurel, L. S. Europe.
233. „ trailing. do.
234. „ sweet-scented, Thunb. Japan.
235. „ hybrid, sweet. Habitat unknown.
236. „ hairy. Italy.
237. „ olive, L. East.
238. „ two-flowered. do.

LXVII. *Garryaceæ.*

239. Garrya, elliptic, Dougl. California.

LXVIII. *Moreæ.*

240. Mulberry, white. East.
241. „ Perrot. Habitat unknown.
242. „ common. S Europe, East.
243. „ red. N. America.
244. Broussonetia, paper mulberry, Vent. Japan.
245. Fig tree, common. S. Europe, East.

LXIX. *Celtideæ.*

246. Nettle tree, European. S. Europe.
247. „ Tournefort's. Asia Minor.
248. „ American. N. America.

LXX. *Ulmeæ.*

249. Elm, English. Europe, East.
250. „ Wych. do.

LXXI. *Euphorbiaceæ.*

251. Box tree, common. S. Europe, East.
252. „ Minorca. Balearic Isles.

LXXII. *Myriceæ.*

253. Comptonia, fern-leaved, Grtn. N. America.

LXXIII. *Salicineæ.*

254. Willow, weeping. Syria, Mesopotamia.

LXXIV. *Plataneæ.*

255. Plane tree, oriental. Levant.
256. „ lobe-leaved. N. America.

LXXV. *Balsamifluæ.*

257. Sweet gum, maple-leaved, L. N. America.

LXXVI. *Cupuliferæ.*

258. Chesnut tree, common. S. Europe, East.
259. Oak, evergreen. S. Europe, N. Africa, East.
260. „ cork. S. Europe, N. Africa.
261. „ Turner's, Willd. Canaries.
262. „ live, Ait. N. America.
263. „ marsh, Duroi. do.
264. „ scarlet, Wangenh. do.

LXXVII. *Abietineæ.*

265. Pine tree, Sabiniana, Dougl. California.
266. „ stone. S. of Europe.
267. „ hemlock spruce, Ait. N. America.
268. „ Nordmann's, Led. Caucasus.
269. „ Siberian stone, Fisch. Siberia.
270. „ Cedar of Lebanon. Syria, Asia Minor.
271. „ Pinsapo, Steud. Spain.
272. „ Cunninghamia, spear-leaved, R. Br. China.
273. „ Norfolk Island. New Caledonia.
274. „ Sir J. Banks's, Pav. Chili.

LXXVIII. *Cupressineæ.*

275. Juniper, common. Europe, East.
276. „ red cedar. N. America.
277. „ Chinese. China.
278. Cypress, pyramidal, Targ. Toz. S. Europe, East.
279. „ horizontal, Mill. do.
280. „ widely-spreading, Targ. Toz. do.
281. „ pendulous, Thunb. Japan.
282. Taxodium distichum, Rich. N. America.
283. Arborvitæ, American. N. America.
284. „ China. China, Japan.

LXXIX. *Taxineæ.*

285. Podocarpus, lengthened, l'Hérit. S. Africa.
286. „ long-leaved, Wall. Japan, China.
287. Gingko, two-lobed, L. Japan.
288. Yew tree, common. Europe, the East.
289. „ winter, Hook. Ireland.

LXXX. *Palmæ.*

290. Date palm tree, common. N. Africa, Syria.

LXXXI. *Smilaceæ.*

291. Smilax, smooth-leaved. Syria.
292. Butcher's broom, prickly, L. Europe, East.
293. „ double-leaved. S. Europe, East.
294. „ thick-leaved. do.

LXXXII. *Aloineæ.*

295. Aloë, pearl, Ait. S. Africa.
296. Adam's needle, thready, L. Virginia, Carolina.
297. „ broad-leaved, L. do.

LXXXIII. *Agaveæ.*

298. Agave, American, L. S. America.

LXXXIV. *Agapantheæ.*

299. New Zealand flax, Iris-leaved, Forst. New Zealand.
300. Blue African lily, umbel-flowered, l'Hérit. S. Africa.

LXXXV. *Amaryllideæ.*

301. Alstrœmeria, stripe-flowered. Peru.
302. „ spot-flowered. do.

LXXXVI. *Gramineæ.*

303. Reed grass, manured, L. S. Europe, East.

I must remark, in addition, that I formed this list with the assistance of my friends, Herren von Hartwitz, Rögner, Kehbach, and Marko. I am very doubtful, however, about several of them, whether they will exist through the winter, even if protected from the frost.

CHAPTER XII.

CLIMATE, SOIL, AND VEGETATION OF SOUTHERN RUSSIA.

The three zones in the east of Europe—Steppe, desert, meadows, and pampas—Condition of the soil—Uniform plains—Substratum of granite—Chalk formation—Steppe limestone—Temperature—Rainfall—Excessive drought—The four seasons—Snow drifts and storms—Tumuli—State of vegetation—Sea hair and feather grass—General pampas plants—The vegetation of the steppe—Burian plants—Burian.

CLIMATE and soil in southern Russia are so peculiar, that it may be worth the trouble to say a few words about them. A plain extends from the centre of Europe, increasing in width from north to south as far as the Ural, and thus forms a triangle, of which those mountains form the base. In the north there are only slight elevations—for the insignificant hills in the north-east, whose extreme height is not more than 1000 feet above the level of the sea, can hardly be taken into account in an extent of 40° latitude and longitude. The surface is generally undulating, but only so far that the hills and plateaux attain a height of a few hundred feet above the level of the sea; but there are some districts which have a completely level surface, resembling that of the ocean.

In the north of this extensive plain are forests, some of which have not been cleared for thousands of years, though this is not the case with all. The ground is covered there with a thick deposit of mould, and the climate differs but slightly from that of Germany, with reference to its variability. To the east and south the forests decrease, so that at 50° of northern latitude, in the meridian of the Black Sea, hardly any bushes or wood are visible. Further to the east the forests do not run so far to the south; and they begin in that direction with the 55° of north latitude.

There is not the slightest doubt that the unwooded condition of the south has existed during the whole existence of man, and has gradually produced the peculiarities which

specially distinguish New Russia, the country of the Don Cossacks, and Cis-Caucasia, as well as the lower countries of the Volga, at the present time. The nations dwelling here were forced to change their place of abode repeatedly, as a permanent spot was not capable of supporting families and cattle. Agriculture prospers only in a few good years: and this was a natural cause for the people to assume nomadic habits.

It is very different in the centre, where forests and unwooded ground alternated, and formed a zone, in which neither was preponderant. Through human activity, ground was gradually gained from the two zones—the forest zone in the north, and the unwooded zone in the south: the central zone gradually grew larger, in which agriculture especially flourished, and which was consequently inhabited by agricultural nations. The northern zone, with its forests, also possessed its peculiarities, which induced the population of that part to select a mode of life harmonizing with them. The forests, like the unwooded districts in the south, would not suffer agriculture; but, on the other hand, they afforded shelter to game and other animals. The male population of these regions was forced to become hunters.

For the interest of my little book, I will now turn my attention to the southern of these three zones, through which a great part of my journey led me. The district we find open, unwooded, but covered with a high growth of plants, is called a steppe; but lately this word has been unjustly transferred to any perfectly sterile district, to sand and other deserts. The word steppe is of Russian origin, and is, in the primitive sense, applied to that condition of vegetation with which we Germans are unacquainted, but which is frequently found in the eastern portion of southern Europe, Siberia, and Armenia. But the plains are not exclusively steppes in those countries, but they alternate with pampas and deserts on one hand, and with pasture lands on the other. It is, therefore, necessary to establish the scientific meaning of the words steppe, meadow, pampas, and desert, before we can proceed to speak about them.

By deserts are meant those larger and smaller districts in which plants enjoy not at all, or only very sparingly, those advantages which are requisite for their growth Only a few peculiar plants are found upon them, which have a special organization suited for such sterile regions. All of them

are scrubby, and are more or less fibrous, at least in the stem. They put forth leaves more scantily than is the usual case with similar plants, and are generally of a greyish colour. Annual plants are extremely rare, and trees are not found at all. The vegetation remains the same the whole year through, though it may be a little more fresh in the countries of the temperate zone during spring, and in the torrid zone in the rainy season. The cause for the existence of a desert may be found in a rocky soil, in drifting sand, or some component in the soil injurious to vegetation, being present in excessive quantities; hence we have various varieties of desert, such as the rocky and gravelly, the sand, and finally the salt, deserts. In those districts contained in the third or southern zone, as far as I am cognizant, only the salt desert is found, while sand deserts have been observed beyond the Caspian Sea, gravelly deserts in Asia Minor, principally in the country known to the ancients as the *κατακεκαυμένη*, and rocky deserts in Arabia and the Sahara. The Russians are not in the habit of calling the salt deserts on the Lower Terek, Lower Kuma, on the Manytch, on the Elton Lake, &c., steppes, but more generally *solniye*, a word corresponding to our salt desert. Göbel's travels did not take place, as he states, in the steppes of southern Russia, but in the salt deserts.

Steppe and pasture land, to which we may add meadows, are the exact contrary of the varieties of desert. Steppe corresponds to the high timber forests, save that the plants here are more woody, and these have a nature allied to that of herbs. As in the woods, there are larger plants found on the steppe whose ramification does not commence at the base, but above the first third, of the stem. As, further, in the timber woods, smaller bushes, or what we term undergrowth, is seen frequently surrounding the trunks of the trees, but generally flourishing best on the verge of the wood; so here smaller plants, from one to two feet in height, grow among the taller plants, many of which attain a height of six and eight feet, some ten and twelve feet. Plants of a height of from twenty to thirty feet, of which other travellers have spoken, I saw nowhere on the steppes, and this statement was probably founded on an error.

These steppes correspond in some degree to the American savannahs, except that the plants grow here more closely together, and are of more equal height. At least the difference between the high and low plants is not distinctly seen. The

height of the various plants is at times from three to four feet, in other places six or eight, and at times ten and twelve. In the first case, the savannahs merge into meadows. The North American prairies, for instance those found in Canada, may belong to this category, though some of them are real meadows. Washington Irving's prairies, however, are genuine savannahs. These again differ materially from the steppe, through thickets of shrubs being more frequently seen, and the grasses and semi-herbaceous varieties occupy an important place. In the real steppes, the grasses are subordinate, and the poa, festuca, and bromus genera (meadow, fescue, and rye grasses), are only found in the shape of low plants.

On the meadows, all the plants attain nearly the same height of one and a half to three feet; very few rise above it. Grasses, papilionaceæ, compositæ, and campanulæ are prevalent. The ramification does not take place as in plants, and is generally very slight. The plants frequently form so thick a sward that the ground cannot be seen. On dropping anything in a meadow, it is supported by what are termed the radicle leaves of the plants, especially of the grasses. This is not the case in even the most closely-covered steppe, where lighter objects fall directly on the ground. Where the vegetation is not extremely thick, the soil may be seen.

In the meadows, the growth of the plants is considerably denser, and the grasses grow to a less height. The majority of them ramify from the root, but the branches are short, are frequently divided, and nearly all bear blossoms, which enamel the surface of the plain. In the steppe and prairie, vegetation has a settled period, generally the end of spring, when the flowers are most abundant. This is not the case, however, in the meadows, for the plants vary continually in their time of flowering. These meadows are principally formed on high ranges of mountains, generally in the vicinity of ravines, but there are instances in which they descend to the plains, as in the south-east of the Caucasian mountains.

By pampas and plains were originally meant the large plains at the mouth of the La Plata river, and extending to the 40th degree of southern latitude, as well as the immense plains in Guiana and tropical America, which are only temporarily covered with vegetation; and wherever those conditions which are requisite for the growth of plants are wanting, they form a desert, which is the more desolate, as there is hardly a trace of vegetation upon it. Even the true desert does not

furnish such a picture of desolation as do the pampas regularly for nine months in the year. There is no more melancholy or even dangerous place to live in than the pampas and llanos during the dry season. The plants remain concealed in the parched up ground until the nourishing moisture arrives, when they rapidly put forth leaves, buds, and fruits, until they once more enter their sleep of nine months' duration.

I have already alluded to the fact that in the south of Russia, or the third unwooded zone, pampas and salt deserts are found, in addition to steppes. It must be remarked that there are also varieties of vegetation not referable to either of these. Such is frequently found on the frontier. In southern Russia pampas are also seen, in which vegetable life does not appear to be entirely extinct during the dry season. This is the case, for instance, in the plain of Noghay, or the continent of the Tauric government.

The above-mentioned conditions of vegetation depend, in as far as they have not been altered by human agency, partly on the soil, or else on the state of the climate. If we, in the first place, examine the soil of southern Russia more closely, we find that revolutions produced by subterraneous forces have effected no material alteration in the ground. With the exception of a bed of granite, we only find strata of no very great age, forming the actual firm surface of the earth. Upon them usually lies a clay alluvium, which is more or less covered by a thick crust of black earth. At some spots in southern Russia, sea-sand lies on the rocky substratum, which is continued inland, but appears then to be covered with alluvium and black earth.

It is now known that the earlier theory, which asserted that lymphatic ducts existed in the interior of the earth, in the same way as the veins in the human body, is not based on any scientific data. On the contrary, the water contained in the earth depends entirely on the rain and the quantity of water falling from the atmosphere. When there is little rain, there are few or no springs; at the season when slight rain falls, the springs flow more sparingly. But in order that the latter may be formed, a soil is required more or less porous, and has receptacles in its interior in which the water can collect. The ground, furthermore, must be more or less undulating, or, even better, mountainous, so that the water which has penetrated at higher spots, when a pressure from above takes place through the rain beginning to fall again, may

flow off at a lower point; that is, make its appearance on the surface of the earth in the form of springs, and feed streams and rivers, or increase their quantity of water. When these conditions are not fulfilled, a want of water will always be perceptible.

If we turn to southern Russia, we find a slightly interrupted or uniform plain, which lies hardly a couple of hundred, at times, only a few, feet above the level of the sea. The difference in elevation is so insignificant, that even in the most porous ground such a quantity of water cannot be collected as to form springs which would flow off in the low land all the year round. The highest point in southern Russia from the Pruth and Dniester, as far as the Volga, is the Bagdo, a small hill only 240 feet in height. The difference in elevation scarcely averages more than fifty feet.

In addition, it must be mentioned that the soil does not display those internal cavities and crevices in which bodies of water could be collected. All the rain which is not evaporated immediately, penetrates through the ground to the hard rock, and is collected there. The deeper this stratum lies, the more water is collected, and is better able to resist the drying influences of the atmospheric air. How desirable it is that as much water as possible should be collected, is seen from the fact, that there are districts where not a single drop of rain falls for more than a year. ' As a general rule, rain only falls in spring and autumn, and there is snow in winter; the whole warm season, from the end of May to the middle of September, is almost always dry.

When we reflect, then, that during this period, and especially from June to August, the earth is so dried and warmed by the sun, that a continually ascending current of air, never holding sufficient moisture in suspension, rapidly absorbs all the moisture which the vicinity of the sea produces, and keeps the clouds at such an elevation that they cannot possibly form any precipitation; when, further, we know that the place of the rising warmer air is occupied by another breeze coming from the north-east and east, and not at all charged with superabundant moisture; we can comprehend the dryness which must prevail, first in the air, and is thence communicated to the soil. This drought must be greater the more infertile the soil is, where only a few plants can diminish the ascending current of air; but, on the other hand, less wherever the alluvium and coat of earth possess more power, and

a more extensive vegetation can spring up. In the first case, that condition of vegetation which I have called desert and pampas, arises; but in the other, the steppes.

I have already said, that the rocky surface of the earth in southern Russia has been proved to consist of granite and also of limestone. The latter belongs either to the chalk formation, or to a very new period, the so-called steppe limestone. The rocky covering beneath the alluvium and the black earth exercises a very important influence. As regards the granite, it forms, as I have already said, a narrow seam, which commences on the Sea of Azov, close to the boundary line of the Noghay plain in the east, upon the right bank of the Berda, and extends, in a north-western direction, as far as Volhynia and Podolia. This granite, too, is seen to the south of Kiev, on the banks of the Dnieper, and causes the rapids in the river.

The granite certainly bears visible traces of the subterraneous revolution, and appears in the shape of boulders at the waterfalls or rapids of the Dnieper. Wherever it appears, it forms, by its dislocation, numerous crevices and spaces, in which water could collect, and really does so; but these crevices are lower than the plains. From this cause the water collected there is of advantage only to a small portion of the surface of the soil and the vegetation growing upon it, and doubtlessly flows in subterraneous channels to the sea, and the large rivers which have a deep bed. Wherever there is granite, the ground is most uneven; the low lands resemble valleys, and even here and there rocks appear in the shape of elevations, or smaller boulders cover the ground. When the latter is the case, and slight weathering has taken place, the vegetation is poor. It becomes better, however, when a stratum of grey, yellow, or reddish clay, containing a quantity of salt—principally culinary salt and saltpetre—is found, and is mixed with seams of alluvium and black earth. The larger this seam becomes, the more the vegetable world upon it flourishes. Generally, however, no luxuriant vegetation is prevalent on any soil which has a granite substratum. The plants grow to no great height, and are not close together. The Russ, in addition, considers the soil cold, and to that circumstance he attributes its want of fertility.

The chalk formation is principally developed on the eastern side of the granitic seam, which it partially surrounds on the Berda. It extends through the whole of the Ukraine, and is

covered with small forests, and a soil which is excellently adapted for agricultural purposes. Further eastward it runs through the country of the Cossacks of the Don. This fertile soil has a peculiar, often very deep, seam, called by the Great Russians, *tchernozom* (black earth), but by the Little Russians, *redzina*. It is principally composed of marl, and a smaller proportion of pasty clay, is of a black colour, but dries very quickly, and dissolves into angular fragments. With equal quickness it again receives moisture, and is converted into a black paste by a superabundance of water. Its fertility is increased by a slight proportion of saltpetre. The argillaceous limestone is more or less porous, attracts the moisture of the upper strata to a certain point, and sometimes forms springs. As the stone can be easily dissolved, the water of the springs and streams is generally thick and milky. The Russians call streams of this description, Maloschnaya Reki, or Milk rivers.

The steppe limestone is most developed in the south, and is principally found in the western portion of the Noghai plain and the Crimea; further to the west of the Dnieper, through the whole government of Cherson, as far as southern Podolia and the Dniester. On the other side, this formation extends to the north of the Caucasian mountains. Here it forms an undulating surface, but in the above-mentioned districts a regular plain, which is scarcely anywhere interrupted. It is covered with a much thinner seam, argillaceous at the bottom, and mixed with black earth, though it is only composed of the latter towards the surface. Sand is frequently found between the steppe limestone and the seam lying above it, which is real sea-sand of the latest period, and comes to the surface at various spots. The upper soil is at times mixed with a small quantity of clay and salt, contains a little saltpetre, and is of a black colour. It is extraordinarily fertile, and is covered generally with a luxuriant growth of steppe vegetation. The uppermost seam, or that which covers the surface, bears a close resemblance to the *tchernozom*, but differs in this respect, that when dried it does not dissolve into angular fragments, but into a fine dust, which becomes unendurable in warm weather.

As regards the climatic conditions, the countries of the woodless zone are remarkable for extremes. While the mean heat is from 6° to 8°, the mercury rises at some places, which are favourable to the development of heat, as high as 32°, and even

more; but, on the other hand, and frequently at the same spot, it falls in winter to 26° or 28° below zero. In January, the countries to the north of the Black Sea have the same temperature as Stockholm—that is, a mean of 4° R.; while, on the contrary, in July, the climate of Madeira prevails in those countries, with an average of 18° R. Consequently, during the twelve months, all the variations of climate found between Madeira and Stockholm, prevail in the countries to the north of the Black Sea. It can be imagined what a powerful effect such a variation of temperature must have, not only on vegetation, but also on organic life. It is the greater, as this variation frequently occurs in one day. A person is able to go out the first half of the day in a light dress, and is obliged to wrap himself in furs during the other portion.

Great as are the extremes between heat and cold, they are equally great, and even more so, with respect to the rain-fall. According to my preceding remarks, it will be found that rain is much rarer here than it is in the same degree of latitude, under different circumstances. Here the greatest difference in the rain-fall takes place during the cooler and warmer seasons. In early spring, autumn, and winter, the rain-fall averages from 350 to 400 millimetres; in the remainder of the hot season, only from 100 to 150 millimetres. In Berlin, the rain-fall during the first season amounts to 1400 lines (or about ten inches); in the other, to 1750 millimetres: consequently, in spite of the northern situation of Berlin, the quantity of meteoric moisture in the cooler season is considerably greater than in the countries to the north of the Black Sea. The difference is considerably greater in the hotter season.

Unfortunately, we do not, up to the present, possess any meteorological tables for the countries I am speaking of, drawn up for a succession of years. An average cannot possibly be formed. There are years in which the rain-fall is very considerable; and others, again, when it is quite absent, and neither rain nor snow falls. Careful observers have noticed seasons during which, for twenty-two or twenty-three months, not a single drop of rain moistened the ground. At times, there are five or six years in succession in which considerable rain falls; then comes a lengthened drought. It is principally this circumstance which renders agriculture in these districts highly precarious, if not entirely impossible. The largest storehouses are not capable to compensate for several successive failures in the crops.

We must, also, remark that the rain-fall primarily and secondarily regulates the quantity of water in the streams and ravines. The large rivers bring down vast masses of water in spring from the forest and central zone, and even receive from the steppe rivers—that is, from those rising in the woodless zone—such an abundance of fluid, that they rise above their banks and overflow large districts. The more moisture the soil can absorb, the longer will it resist desiccation, and promote the growth of vegetation. If the inundations have been partial, or have not taken place at all, the steppe rivers receive but little fluid, and dry up with extraordinary rapidity. With the desiccation of these waters, there is generally a perfect cessation in the growth of vegetation.

The spring only lasts for a short space. In the Crimea, it generally begins with the first days of March, but at times much later. The vegetation is rapidly developed, in spite of the night frost, and collects in the steppe that energy which enables it to resist a long, lasting heat, or else dies away in a few months, as is the case in the pampas. In proportion as the soil is covered with plants, the longer do they maintain their verdure, but whenever they die away rapidly, as in the pampas, the ground grows heated with extraordinary rapidity: an exhalation of heated air commences, which continues even during the night, and is scarcely ever interrupted. As the countries on the Black Sea and Sea of Azov possess the least vegetation, there is scarcely any rain there during the whole of the warm season. Most fearful storms frequently rage over the adjacent sea; the rain pours down in streams there, but not a drop falls on land. On the other hand, rain-clouds frequently collect there, electrical discharges take place in the highest regions, but the former sail towards the sea, where no warm currents of air check their propensity for declination. The moisture, also, which has formed there is immediately absorbed again by the same heated current of air, which is not charged with any superabundance of moisture.

With each week of summer, the heat becomes more insupportable. At the outset, the sky is of the purest azure; it only appears more or less overcast over the larger rivers, where continuous evaporation is taking place. Soon, however, the pure colour disappears; it becomes daily more milky; and that haze sets in which is frequently visible in our country in hot days, but which is much more prominent in the south, especially over deserts. In a similar manner, the sun grows

gradually more red at setting, although it never attains that blood-red hue which is perceptible in Arabia and the Sahara. As in those districts a scorching wind sets in in the country north of the Sea of Azov and the Black Sea, but it is only partial, and considerably weaker. It is even more parching than the east wind, and has the most injurious effect on the vegetation. All the plants hang their leaves, turn yellow, and frequently die. It is worst of all when it blows over fields of corn. In July, all the water in the pampas and the adjacent country is evaporated; in the month of August and beginning of September, water is sought for in vain in the steppe regions, except in the vicinity of large rivers. Here, too, the vegetation gradually dies away, and the stems of the plants, six or eight feet in height, are alone visible, which the Russians call Burian, and apply to all sorts of purposes, but principally as fuel for the winter.

In the middle of September, cooler weather sets in, in which the trade winds cease blowing, at least for a short period, in the unwooded zone, and produces a change in the temperature: with this a fresh vegetation commences. The buds for the next year are not only formed on perennial plants, but many of them are covered with a new coat of verdure. In October, there is a considerable quantity of rain, and the ground grows so soft that there is great difficulty in walking over it. In November, it grows colder, and storms set in, of which we can form no idea. Whirlwinds are very frequent, and cause an immense amount of destruction. In December the winter generally commences, though frequently without a flake of snow falling. The cold is, consequently, much more severely felt, and principally by the plants, of which immense quantities are killed. There are winters, on the other hand, in which a great deal of snow falls. The storms at this season are terrible, and the wind generally blows from the east and north-east, at times for more than half the year, and not unfrequently becomes a hurricane. It raises the dust aloft, and drives it before it in the shape of a pillar; but it is much worse if snow is lying, as the entire mass is raised up by a whirlwind and carried away. Woe to the flock which is surprised by such a snow-drift (called samet by the Russians). The cattle are terrified, and disperse in every direction. It is almost impossible to see a step before you, and the road is continually lost. As a snow-drift at times lasts several weeks, though usually only three days,

sheep and oxen, and frequently men, cannot find their homes, are exhausted by terror and hunger, and finally perish from cold. It is a very frequent circumstance for sheep to run right into the sea or large rivers, and be drowned. The sheep, also, in such cases, are continually devoured by wolves. Fortunately, the herdsmen have their signs by which they can perceive the approach of a storm, and so remain at such a season under cover; but the Tatar leaves his herd in the open air through the winter, and exposes them to all the perils of such a snow-drift. It is not surprising, then, that one-third of his herd at least perishes in unfavourable weather.

No less dangerous are the snow-storms (Wyuga, among the Russians), even when only a gentle breeze is blowing, or in a perfect calm. A darkness frequently sets in, so that it is impossible to see ten paces before you. Any one who does not possess a good knowledge of the locality—I might say instinct—can easily miss his road, and be exposed to extreme peril. Travelling during the winter, especially when snow has fallen, is a matter of considerable danger in southern Russia. In consequence of the great distance between the villages, they can be easily missed; but even when you are close to them, it frequently occurs that you cannot see the low houses, which are partially imbedded in the ground, and therefore are called Semlyanken—i.e., earth cabins, by the Russians. Prince Woronzoff, consequently, has done himself great honour by having pyramids of white stone, twelve feet high, built, if I am not mistaken, at a distance of a verst from each other, which clearly indicate the course of the roadway. I am disposed to believe that the mounds or tumuli (Mohilli or Kurgan, as the natives term them), and the stone pillars erected by the earlier nations that lived here, served the same purpose. On the northern coast of the Black Sea, I always found that the tumuli and stones were in a certain regular direction, running from east to west. As I have mentioned the tumuli, I will also call attention to a peculiarity in them which is highly interesting. It has hitherto been believed that only the stones found in such tumuli were brought from a considerable distance; but through the investigations of a man who has lived many years in those districts, it appears as if a great portion of the earth employed in the formation of the mound had been brought from some distance off, or at least not found in the immediate vicinity. May we not presume that the universal

custom still found among the Cossacks of the Don, of carrying a bagful of their native earth on their breast, in order that they might take it with them into the grave in the case of a sudden death, emanates from the same feeling of reverence for their native land?

After thus giving a description of the soil and climatic peculiarities, I will attempt to describe the vegetation of the south Russian pampas and steppes, in a few words. With regard to the former, the vegetation is found in its truest character in the western portion of the Noghai plain. The vegetation there endures for three or four months, and is composed of a number of plants of the same family, growing closely together, and in groups. Usually, there are only from four to eight varieties, which succeed each other; while the other plants are found isolated, and cannot be regarded as forming characteristics of the pampas.

The commonest plant on the pampas is the hair grass (*Stipa capillata*, L., called Tyrse by the Russians), for it frequently covers more than one half of the surface. Next to it comes its congener, the feather grass (*Stipa pennata*, L., called by the Russians Schelkovoi trava, that is, silk weed), which generally covers a fourth of the pampas. Though these varieties are not admired among us as food for sheep and oxen, they form the principal nourishment in the south Russian provinces. In their growth, they bear a distant resemblance to some of the orchideæ, which are propagated by pseudo bulbs, as the young buds only grow in one direction. As it seemed to me, this direction depends on the prevailing wind, for the majority of those I examined turned their buds to the west or south-western side. The withered leaves and stems do not die away immediately, but last for a considerable time. They thus form a layer of grass raised one inch or more above the ground. We find the same among various rye grasses in our marshy meadows, principally in the turfy and slender spiked sedges (*Carex cæspitosa* and *C. acuta*, L.), with this difference, that the new buds do not grow on one side, and more inwardly than externally. The formation of new buds, however, differs less in the round-headed club rush (*Scirpus Holoschœnus*), and other plants. As the buds grow with considerable regularity on one side, the age of such a plant can be decided with a considerable degree of certainty. These circumstances suffice to explain the presence of so much feather and hair grass, as these

destroy all the other plants, and even when decayed hold their ground for a long while. The inhabitants of these districts are frequently compelled to hoe them out, but employ them for fuel.

In July, the two grasses have generally ripe seed. At this period they are a very dangerous torment to sheep. The seed, namely, hangs to the wool, and through the movements of the animal continually penetrates deeper, until it finally reaches the skin, and produces an incessant irritation. During the great heat prevailing in the pampas during July and August, the sores are inflamed, and this inflammation kills a great number of sheep. To prevent loss, the shepherd and his family are compelled to pick out the seeds every evening. Owing to the quantity of sheep and plants which bear this dangerous seed, this is a most troublesome task, rendered the more fatiguing as the awn frequently breaks off, and it is a difficult matter to detect the seed in the wool. Even the greatest care is not always sufficient to guard against this disagreeable disease.

The other grasses are not so widely propagated. Sheep's fescue grass, nodding and crested brome grass, are more frequently seen; while glaucous lyme grass, rush-leaved wheat grass, crested wheat grass, prickly *crypsis*, hard dog's-tail grass, the bulbous, pilose, spreading meadow grasses, and the soft, scaly, barren, and corn home grasses, are only found in small patches. Among the sword grasses we also find the narrow-leaved, bracteated, Schreibers', Skuhr's, downy-fruited and hairy, sedges.

The principal plants found on the pampas are:

The Upright pink (Dianthus guttatus, Bieb.).
„ Panicled gypsophila (Gypsophila paniculata, L.).
„ Round-leaved mallow (Malva rotundifolia, L.).
„ Spring pheasant's eye (Adonis vernalis, L.).
„ Silvery cinquefoil (Potentilla argentea).
„ Altai meadow-rue (Leontice altaica, Pall.).
„ Luzern Medic. (Medicago sativa).
„ Dutch clover (Trifolium repens).
„ Esculent trefoil (Melilotus officinalis, Pers.).
„ Small saxifrage (Pimpinella saxifraga).
„ Cheese rennet bedstraw (Galium verum).
„ Hedge ditto (G. Mollugo, L.).
, Trailing ditto (G. humi fusum, Bieb.).

The May weed (Anthemis Cotula, L.).
„ Gerber's milfoil (Achillea Gerberi, Willd.).
„ Yarrow ditto (Millefolium, L.).
„ Austrian wormwood (Artemisia austriaca, Jacq.).
„ Drooping flowered ditto (A. maritima, L.).
„ Roman ditto (A. pontica, L.).
„ German inula (Inula germanica, L.).
„ Small fleabane (Pulicaria dysenterica, Grtn.).
„ Officinal dandelion (Taraxacum officinale, Vill.).
„ Rough sow thistle (Sonchus asper, L.).
„ Larger centaury (Centaurea Scabiosa, L.).
„ Wide-spreading ditto (C. diffusa, Lam.).
„ Savory-leaved thyme (Thymus Marschallianus, Willd.).
„ Nodding sage (Sálvia nutans, L.).
„ Meadow ditto (S. pratensis, L.).
„ Henbit archangel (Lamium amplexicaule, L.).
„ Saw-leaved horehound (Marrubium peregrinum, L.).
„ Common linaria (Linaria vulgaris, Mill.).
„ Flax-leaved spurge (Euphorbia Gerardiana, Jacq.).
„ Slender-leaved ditto (E. tenuifolia, Bieb.).
„ Gromwell-leaved ditto (E. Esula, L.).
„ Tatarian thrift (Statice tatarica, L.).
„ Broad-leaved ditto (S. latifolia, Jell.).
„ Kali saltwort (Salsola Kali, L.).
„ Dwarf flower-de-luce (Iris pumila, L.).
„ Single yellow tulip (Tulipa sylvestris, L.).
„ Garden ditto (T. Gesneriana, L.),
(Mescari leucophæum, C. Koch).
„ Round garlic (Allium rotundum, L.).
„ Small yellow ditto (A. flavum, L.).
„ Panicled ditto (A. paniculatum, L.).

The finest specimens of steppe are found, as I have already stated, in the country of the Cossacks of the Don, and Cis-Caucasia. Here the larger plants attain a height of from six to eight feet, so that we can credit the stories told of the Cossacks, that these warlike tribes concealed themselves and their horses in the thickets of the steppe. The Russ distinguishes the larger varieties of plants from the smaller by special names. The former afford his cattle very slight or no nourishment, but their partly woody stems serve him as fuel in winter. He calls these plants burian, but applies this

name to all the taller weeds, which are more luxuriant in his gardens and meadows than the cultivated plants, and frequently choke them up entirely. Complaints are frequently heard of the spreading of the burian, but no trouble is taken to extirpate the troublesome weeds. Professor Schleiden, in Jena, in his interesting lectures on the life of a plant, applies the term burian to a special plant, the *Gypsophila paniculata*, L., which, however, the Russians do not count as forming burian. This panicled *Gypsophila* is a very common plant in the steppes, known by the name of Perekatipole, which, in children's tales and fables, plays a part equal to that of the Rose of Jericho. The first-mentioned plant, which has recently been much employed in our gardens for its pretty little flowers, ramifies considerably from the root upwards, in such a manner that it forms a round, thick bush. When it has finished flowering, and run to seed, the main stalk breaks off close to the root, and the plant is carried hither and thither by the slightest breeze: other small withered plants attach themselves to it, and it gradually forms a tangled mass, which is borne across the plain by the wind. This is the steppe witch, which brings persons good or ill luck. It is not, however, always the panicled *Gypsophila* which forms these masses, and has given rise to all sorts of stories. The *Phlomis pungens*, Willd., which is rather heavier, but also grows in the shape of a round bush, is driven by the wind across the steppe, and terrifies the children.

The principal Burian plants belong to the families of the *Dipsaceæ*, *Umbelliferæ*, *Malvaceæ*, *Papilionaceæ*, and *Labiatæ*, but principally to the three first. Among the *Compositæ*, thistles are again prominent. It is not my design to describe all the plants, and I will, therefore, content myself by mentioning those which are most widely propagated on the steppe, and give it a special character. They are:

The Great globe thistle (Echinops sphærocephalus, L.).
„ Silybum marianum, Grtn.
„ Common cotton thistle (Onopordon Acanthium, L.).
„ Curled ditto (Carduus crispus, L.).
„ Serrated epitrachys (Epitrachys serrulata, C. Koch).
„ Lance-leaved ditto (E. lanceolata, ditto).
„ Field cirsium (Cirsium arvense, Scop.).
„ Larger lappa (Lappa major, Grtn.).

The Tooth-leaved ditto (Lappa tomentosa, Lam.).
„ Wild succory (Cichorium Intybus, L.).
„ Prickly lettuce (Lactuca Scariola, L.).
„ Broad-leaved groundsel (Senecio Doria, L.).
„ Long-leaved ditto (S. macrophyllus, Bieb.).
„ Common ragwort ditto (S. Jacobæa, L.).
„ Vervain-leaved ditto (S. erucæfolius, L.).
„ Common tansy (Tanacetum vulgare, L.).
„ Common wormwood (Artemisia Absinthium, L.).
„ Mugwort ditto (A. vulgaris, L.).
„ Lofty ditto (A. procera, Willd.).
„ Cluster-flowered feverfew (Pyrethrum corymbosum Willd.).
„ Spine-seeded xanthium (Xanthium spinosum, L.).
„ Small burdock ditto (X. Strumarium, L.).
„ Elecampane inula (Inula Helenium, L.).
„ Pierced Galatella (Galatella punctata, Lindl.).

The principal *Dipsaceæ* are:

Jag-leaved tragel (Dipsacus laciniatus, L.).
Tatar buttonwood (Cephalaria tatarica, Schrad.).
Centauroid ditto (C. Centaurioides, Coult.).

The *Umbelliferæ*:

Field erugo (Eryngium campestre, L.).
Flat-leaved ditto (E. planum, L.).
Siberian libanotis (Libanotis sibirica, C. A. Mey).
Wood fennel (Ferulago sylvatica, Rchb.).
Tatar ditto (Ferula tatarica, Fisch.).
Caucasian sulphurwort (Peucedanum ruthenicum, Bieb.).
Garden parsnip (Pastinaca sativa, L.).
Siberian cow parsnip (Heracleum sibiricum, L.).
Common ditto (H. sphondylium, L.).
Three-lobed siler (Siler trilobum, Scop.).
Woodland anthriscus (Anthriscus sylvestris, Hoffm.).
Bulbous-rooted chervil (Chærophyllum bulbosum, L.).
Curling cachrys (Cachrys cryspa, Pers.).
Spotted-stalked hemlock (Conium maculatum, L.).

Malvaceæ:

Large-flowered Lavatera (Lavatera thuringiaca, L.).
Biennial ditto (L. biennis, Bieb.).
Officinal marsh mallow (Althæa officinalis, L.).

Hemp-leaved ditto (A. cannabina, L.).
Fig-leaved ditto (A. ficifolia, Cav.).
Vervain mallow (Malva Alcæ, L.).
Common ditto (M. sylvestris, L.).

Papilionaceæ:

Blue melilotus (Melilotus cœrulea, Lam.).
White ditto (M. alba, Lam.).
Officinal ditto (M. officinalis, Pers.).
Glandulous liquorice (Glycyrrhiza glandulifera, W. et K.).
Prickly capsuled ditto (G. echinata, L.).
Officinal goat's rue (Galega officinalis, L.).

Lastly, the *Labiatæ:*

Austrian sage (Salvia Austriaca, L.).
Meadow ditto (S. pratensis, L.).
Wild ditto (S. sylvestris, Koch).
Hungarian catmint (Nepeta pannonica, L.).
Violet-coloured ditto (N. violacea, L.).
Upright hedge-nettle (Stachys recta, L.).
Pungent phlomis (Phlomis pungens, W.).
Tuberous-rooted ditto (P. tuberosa, L.).

In addition, I can add, as belonging to other distinct genera, the varieties of Mullein (*Verbascum*), and one biennial tree primrose (*Œnothera biennis*, L.).

All the smaller plants, especially on the steppes and savannahs, which form the principal food of cattle, are called by the Russians, Trava. If they wish to designate a weed, they prefix the word, durnaya (*i.e.*, ugly). Those steppe herbs not higher than a foot and half are divided into the following families:—

Cynarocephalæ:

Musk thistle (Carduus nutans, L.).
Welted ditto (C. acanthoides, L.).
Common carline (Carlina vulgaris).
Annual marygold (Xeranthemum annuum, L.).

Corymbiferæ:

Italian starwort (Aster Amellus, L.).
Annual erigeron (Erigeron canadensis, L.).
Common linosyris (Linosyris vulgaris, Cass.).

Annual ditto (L. villosa, Dec.).
Conyza inula (Inula Conyza, Dec.).
Hoary ditto (I. Oculus Christi, L.).
Creeping-rooted ditto (I. britannica, L.).
Common chamomile (Anthemis ruthenica, Bieb.).
Mayweed ditto (A. Cotula, L.).
Strong-scented milfoil (Achillea nobilis, L.).
Gerber's ditto (A. Gerberi, Willd.).
Yarrow ditto (A. Millefolium, L.).
Scentless matricaria (Matricaria inodora, L.).

Lactucaceæ:

Rough sowthistle (Sonchus asper, Vill.).
Officinal dandelion (Taraxacum officinale, Wigg.).
Tauric viper's grass (Scorzonera taurica, Bieb.).
Great goat's-beard (Tragopogon major, L.).
Yellow ditto (T. pratensis, L.).
Floccous ditto (T. floccosus, W. and K.).

Labiatæ:

Wild thyme (Mentha sylvestris, L.).
Meadow ditto (M. pratensis, L.).
Common marjoram (Origanum vulgare, L.).
Savory-leaved thyme (Thymus Marschallianus, Bieb.).
Sweet-scented ditto (T. odoratissimus, Bieb.).
Corn-shaped ditto (T. nummularius, Bieb.).
Wild ditto (T. Serpyllum, L.).
Thyme-leaved Acinos (Acinos thymoides, Mnch).
Common wild Basil (Clinopodium vulgare, L.).
Common catmint (Nepeta Cataria, L.).
Common ground ivy (Glechoma hederaceum, L.).
Moldavian balm (Dracocephalum Moldavica, L.).
Great-flowered self-heal (Prunella grandiflora, L.).
Common ditto (P. vulgaris, L.).
Tallest skull-cap (Scutellaria altissima, L.).
Saw-leaved horehound (Marrubium peregrinum, L.).
Common ditto (M. vulgare, L.).
Wood betony (Betonica officinalis, L.).
Upright hedge-nettle (Stachys recta, L.).
Common motherwort (Leonurus Cardiaca, L.).
Small-flowered ditto (L. Marrubiastrum, L.).
White archangel (Lamium album, L.).
Black stinking horehound (Ballota nigra, L.).

Wall germander (Teucrium Chamædrys, L.)
Poley ditto (T. Polium, L.).

Papilionaceæ:

Common onobrychis (Onobrychis sativa, Lam.).
Various-coloured coronilla (Coronilla varia, L.).
Tufted vetch (Vicia Cracca, L.).
Bush ditto (V. sepium, L.).
Small-flowered rest-harrow (Ononis Columnæ, All.).
Strong-scented ditto (O. hircina, Jacq.).

Umbelliferæ:

Trinia Kitaibelii, Bieb.
Falcaria Rivini, Host.
Common gout-weed (Ægopodium Podagraria, L.).
Common caraway (Carum Carvi, L.).
Small burnet saxifrage (Pimpinella Saxifraga, L.),
Various-coloured meadow ditto (Seseli varium, Trev.)
Field saxifrage (S. campestre, Bess.).
Twisted ditto (S. tortuosum, L.).
Rumia leiogyna, C. A. Mey.
Veined cnidium (Cnidium venosum, Koch.).
Common carrot (Daucus Carota, L.).
Carrot-leaved burr parsley (Caucalis daucoides, L.).

Cruciferæ:

Bitter winter-cress (Barbarea vulgaris, R. Br.).
Arched ditto (B. arcuata, Rchb.).
Perennial honesty (Lunaria rediviva, L.).
Hoary berteroa (Berteroa incana, Dec.).
Small-fruited madwort (Alyssum calycinum, L.).
Rostrate ditto (A. rostratum, Stev.).
Least ditto (A. minimum, Willd.).
Dame's violet rocket (Hesperis matronalis, L.)
Common sisymbrium (Sisymbrium officinale, Scop.).
Reedy ditto (S. junceum, Bieb.).
Loesilius' ditto (S. Loeselii, L.).
Broad-leaved ditto (S. Irio, L.).
Flix-weed ditto (S. Sophia, L.).
Upright hedge mustard (Erysimum strictum, Grtn.).
Golden ditto (E. aureum, Bieb.).
Cultivated camelina (Camelina sativa, Crantz.).

Shepherd's-purse capsella (Capsella Bursa pastoris, Mnch.).
Whitlow pepper-wort (Lepidium Draba, L.).
Dittander ditto (L. latifolium, L.).
Charlock mustard (Sinapis arvensis, L.).
Tatarian colewort (Crambe tatarica, Jacq.).
Rough ditto (C. aspera, Bieb.).
Perennial bunias (Bunias orientalis, L.).

The grasses play a subordinate part in the steppes. The *Saccharum Ravennæ*, Bieb., must be counted among the plants. The others are generally contained in the genera of *Lolium*, *Triticum*, *Bromus*, *Festuca*, *Kœleria*, *Poa*, &c. These are generally the varieties growing in our own land. I pass over the other families, as they have only single representatives. The *Chenopodaciæ*, *Euphorbiaceæ*, *Polygoniæ*, *Plantaginiæ*, *Plumbaginiæ*, but especially the rough-leaved genera, the *resodeæ*, *Geraneaceæ*, *Malvaceæ*, and *Scrophulariniæ*, are principally represented.

I have already had frequent opportunities of mentioning that the woody plants are not excluded from the steppes. The wild pear-tree is frequently met with, and is regarded with peculiar veneration by the Cossacks. It is the type of unrequited love, and is repeatedly mentioned in songs and ballads. I am disposed to regard the wild pear as indigenous to south-eastern Russia. It would be worth while to compare it with our cultivated varieties.

It is a very interesting circumstance that the common pine-tree, though in a very stunted, bushy shape, grows on the steppe, principally on the central Don. Among the *Cupuliferæ* we find, though they are rare:

The common hazel-nut tree (Corylus Avellana, L.).
The sessile-flowered or common oak (Quercus sessiliflora, Sm.).
Long pedunculated ditto (Q. pedunculata, Ehrh.).
Durmast ditto (Q. pubescens, Willd.).

Among the *Salicinæ*:

The white willow (Salix alba, L.).
Almond-leaved ditto (S. amygdalina, L.).
Common osier ditto (S. viminalis, L.).

Grey ditto (S. cinerea, L.).
Phlomoid ditto (S. phlomoides, Bieb.).
Round-leaved ditto (S. Caprea, L.).
White poplar or abele (Populus alba, L.).
Aspen (P. tremula, L.).
Black ditto (P. nigra, L.).

Betuleæ:

Common birch tree (Betulus alba, L.).
Common alder (Alnus glutinosa, Willd.).

One *Gnetacea:*

Common ephedra (Ephedra vulgaris, Rich.).

Moriæ:

Tatarian mulberry tree (Morus tatarica, L.).

The principal shrubs belong, however, to the *Papilionaceæ*, as:

Sarothamnus scoparius, Wimm.
Austrian cytisus (Cytisus austriacus, L.).
Headed ditto (C. capitatus, Jacq.).
Trailing ditto (C. supinus, L.).
Two-flowered ditto (C. biflorus, l'Hérit.).
Laburnum ditto (C. Laburnum, L.).
Black-rooted ditto (C. nigricans, L.).
Bird-cherry tree (Prunus Padus, L.).
Bastard ditto (P. Chamæcerasus, Jacq.).
Dwarf almond (Amygdalus nana, L.).

The *Pomaceæ*:

White hawthorn (Cratægus oxyacantha, L.).
Monogynous ditto (C. monogyna, Jacq.).
Common cotoneaster (Cotoneaster vulgaris, Lindl.).
Common apple (Pyrus malus, L.).

Rosaceæ:

Crenated spiræa (Spiræa crenata, L.).
Dewberry bramble (Rubus cæsius, L.).
Shrubby ditto (R. fruticosus, L.).
Burnet-leaved rose (Rosa pimpinellifolia, L.).
Dog ditto (R. canina, L.).
Sweet briar ditto (R. rubiginosa, L.).

Rhamneæ:
Purging buckthorn (Rhamnus cathartica, L.).
Berry-bearing alder (R. frangula, L.).

Anacardiaceæ:
Venice sumach (Rhus Cotinus, L.).

Celastrineæ:
Common spindle tree (Evonymus europæus, L.).

Tamariceæ:
Tamarix tetrandra, Pall.

Berberideæ:
Common barberry (Berberis vulgaris, L.).

Acerineæ:
Common maple (Acer campestre, L.).
Tatarian ditto (A. tataricum, L.).

Solaneæ:
Russian boxthorn (Lycium ruthenicum, Murr.).

And *Caprifolianeæ*:
Common elder (Sambucus nigra, L.).
Gelder rose viburnum (Viburnum Opulus, L.).
Wayfaring tree (V. Lantana, L.).

THE END.

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